

palgrave  
macmillan

# The Theatre of Production

Philosophy and Individuation  
between Kant and Deleuze

---

Alberto Toscano



## The Theatre of Production

## *Renewing Philosophy*

General Editor: **Gary Banham**

### *Titles include:*

Kyriaki Goudeli  
CHALLENGES TO GERMAN IDEALISM  
Schelling, Fichte and Kant

Keekok Lee  
PHILOSOPHY AND REVOLUTIONS IN GENETICS  
Deep Science and Deep Technology

Jill Marsden  
AFTER NIETZSCHE

Simon O'Sullivan  
ART ENCOUNTERS DELEUZE AND GUATTARI  
Thought Beyond Representation

Celine Surprenant  
FREUD'S MASS PSYCHOLOGY

Alberto Toscano  
THE THEATRE OF PRODUCTION  
Philosophy and Individuation between Kant and Deleuze

Jim Urpeth  
FROM KANT TO DELEUZE

Philip Walsh  
SKEPTICISM, MODERNITY AND CRITICAL THEORY

Martin Weatherston  
HEIDEGGER'S INTERPRETATION OF KANT  
Categories, Imagination and Temporality

---

### **Renewing Philosophy**

**Series Standing Order ISBN 0-333-91928-9**

*(outside North America only)*

You can receive future titles in this series as they are published by placing a standing order. Please contact your bookseller or, in case of difficulty, write to us at the address below with your name and address, the title of the series and the ISBN quoted above.

Customer Services Department, Macmillan Distribution Ltd, Houndmills, Basingstoke, Hampshire RG21 6XS, England

---

# The Theatre of Production

**Philosophy and Individuation  
between Kant and Deleuze**

Alberto Toscano

palgrave  
macmillan



© Alberto Toscano 2006

All rights reserved. No reproduction, copy or transmission of this publication may be made without written permission.

No paragraph of this publication may be reproduced, copied or transmitted save with written permission or in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency, 90 Tottenham Court Road, London W1T 4LP.

Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

The author has asserted his right to be identified as the author of this work in accordance with the Copyright, Designs and Patents Act 1988.

First published 2006 by  
PALGRAVE MACMILLAN  
Houndmills, Basingstoke, Hampshire RG21 6XS and  
175 Fifth Avenue, New York, N.Y. 10010  
Companies and representatives throughout the world.

PALGRAVE MACMILLAN is the global academic imprint of the Palgrave Macmillan division of St. Martin's Press, LLC and of Palgrave Macmillan Ltd. Macmillan® is a registered trademark in the United States, United Kingdom and other countries. Palgrave is a registered trademark in the European Union and other countries.

ISBN-13: 978-1-4039-9780-7

ISBN-10: 1-4039-9780-2

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources.

A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data  
Toscano, Alberto.

The theatre of production: Philosophy and individuation between  
Kant and Deleuze / Alberto Toscano.

p. cm.—(Renewing philosophy)

Includes bibliographical references and index.

ISBN 1-4039-9780-2 (cloth)

1. Individuation (Philosophy) 2. Kant, Immanuel, 1724–1804.

3. Deleuze, Gilles. I. Title. II. Series.

BD394.T67 2005

111—dc22

2005049293

10 9 8 7 6 5 4 3 2 1

15 14 13 12 11 10 09 08 07 06

Printed and bound in Great Britain by  
Antony Rowe Ltd, Chippenham and Eastbourne

# Contents

<i>Series Editor's Preface</i>	vii
<i>Acknowledgments</i>	ix
<i>Preface</i>	x
<b>Introduction: From the Intelligible to the Genetic</b>	<b>1</b>
The ontology of anomalous individuation	1
Is there a science of the individual?	4
Univocity, haecceity and the birth of the object	7
Individuation and the ontological difference	11
<b>Part I Kant Beyond Kant, or, The Anomalies of the Organic</b>	
<b>1 The Paradoxical Object: On Self-Organizing Beings in the <i>Critique of Judgment</i></b>	<b>19</b>
1.1 The anomaly of self-organization	19
1.2 Defining nature	25
1.3 The object of cognition and the evidence of individuality	27
1.4 Causality and mereology in natural purposes	32
1.5 The Antinomy of Teleological Judgment and its ontological conversion	37
1.6 Analogy, contingency and the technic of nature	40
<b>2 The Fate of Self-Organization: From Natural Machines to the Philosophy of the Organism</b>	<b>44</b>
2.1 <i>Materia soluta, materia ligata</i> : individuation in Kant's <i>Opus Postumum</i>	44
2.2 Autonomy and allonomy: Kant's biophilosophical legacy	55
2.3 Events, prehensions and subjective aim: the philosophy of the organism	60
2.4 Remark on self-organization and transcendental philosophy	78

<b>3</b>	<b>The Method of Nature, the Crisis of Critique: Life, Multiplicity and the Genesis of the Intellect in Nietzsche's Early Notebooks</b>	<b>85</b>
3.1	April 1868	85
3.2	$X = X$	88
3.3	All unity is relative	94
3.4	Life force = ?	97
3.5	A materialism without matter?	104
<b>Part II</b>	<b>Elements for an Ontology of Anomalous Individuation</b>	
<b>4</b>	<b>Systems of Habit: Ravaisson, James, Peirce</b>	<b>109</b>
4.1	Habit as a method of nature: ambivalence and paradox	109
4.2	The sedimentation of desire and the canalization of matter: two images of habit	116
4.3	Chance, law, habit (the <i>Monist</i> papers)	123
4.4	'Possibilities beyond all multitude', or, Peirce's Continuum Hypothesis	129
4.5	The return to teleology and the temptations of spontaneity	132
<b>5</b>	<b><i>Tertium Datur?</i> Gilbert Simondon's Relational Ontology</b>	<b>136</b>
5.1	Relation: disparation versus symbolism	136
5.2	Information: critique of the code	142
5.3	Interaction: beyond determinism and organicism	147
5.4	Transduction: search for a method	151
<b>6</b>	<b>The Drama of Being: Figures of Individuation in Deleuze's Philosophy of Difference</b>	<b>157</b>
6.1	Internal difference and the theory of multiplicities	157
6.2	Structuralism and individuation: static genesis and the paradoxical entity	167
6.3	The rhythms of immanence: haecceity, intensity, subjectivity	175
6.4	Functionalism and the ontology of relations	180
6.5	<i>Asylum Ignorantiae?</i>	187
Conclusion: Becoming Individual		199
<i>Notes</i>		202
<i>References</i>		236
<i>Index of Names</i>		243
<i>Index of Concepts</i>		246

# Series Editor's Preface

In the history of modern philosophy, empiricism's self-presentation has been consistently epistemological. This has almost defined it *against* the rationalist position when we recall that the principal proponents of the latter – Leibniz and Spinoza – have, by contrast, been thinkers of a decidedly ontological bent. The relationship of this division within modern metaphysics to both the Kantian transcendental turn and the contemporary division of philosophy into the camps of Anglo-American and European is also worthy of remark. Carrying on the emphasis on epistemology derived from the classical British advocates of empiricism, the analytical tradition of philosophy has tended to eschew ontology and to find its principal motivations in setting out a philosophical procedure that will eliminate the need for it. By contrast, the contemporary European tradition traces its lineage to figures such as Husserl and Bergson, who revived the quest for an ontological basis for metaphysics. Hence, the divide between the analytical method in philosophy and the European traditions of phenomenology and virtual vitalism seems to replicate the classic division between rationalism and empiricism.

To complicate this story somewhat, we need however to ask what difference the transcendental moment that Kant represents made to the original division between the rationalists and the empiricists? In posing the transcendental question about the conditions of the possibility of experience, Kant made 'experience' itself into an object of investigation in a manner that refused to treat it – despite the readings of certain Neo-Kantians – purely epistemologically, as the investigations of life, purposiveness, teleology and substance clearly attest. In thus making transcendental philosophy a meeting ground for ontological and epistemological inquiries, Kant should have posed a challenge to the divide we sketched in the paragraph above in a manner one would expect to be lasting. So, one might ask, why does it appear that contemporary philosophy has so resolutely resisted this transcendental road?

One key reason for this resistance within contemporary Anglo-American philosophy has been a consistent repudiation of idealism in favour of materialism. The materialist tradition in philosophy was, for many centuries, practically submerged, but threatens in some respects in the contemporary world to become almost dominant. What the



insistence on materialism is often today accompanied by, however, is a form of empiricism that repeats the epistemological bias of the past, and in so doing severs itself from the key ontological questions that materialism should be concerned with. In this work, Alberto Toscano recovers a history of the doctrine of transcendental materialism, a doctrine argued here to be coterminous with a thought of transcendental empiricism. In articulating this position Toscano has provided a significant alternative to the standard divisions in contemporary philosophy and suggested a possible bridge that could bring together traditions too long at variance. *Renewing Philosophy* is intended as a series presenting work that will force reconsideration of both the modernity that contemporary philosophy is heir to, and to engage with the contemporary world in which philosophical reflection takes place. This work suggests that the modern traditions of philosophy contained within them the potential to unleash the thought here described, a potential that contemporary circumstances render imperative. In these respects, this book seeks to *renew* philosophy and this is the reason for its publication in this series.

GARY BANHAM

# Acknowledgments

This work owes a lot to the friendship and encouragement of Keith Ansell Pearson, without whom, among other things, I would have spared myself the maddening pleasure of Whitehead's writings. Its aim would have been far less sure were it not for the polemical camaraderie of all those involved in the production of *Pli*, especially Ray Brassier, Michelle Speidel, Jon Rubin and John Appleby, some of whom, along with Damian Veal and Mogens Laerke, kindly commented on and corrected versions of this manuscript. To Manuel and the folk at Zago Design, I am grateful for turning Chladni's sound figures into the cover image for this book. For being an unwitting catalyst of this work, I would like to thank Jim O'Shea, who, contravening customary practice in the teaching of Kant, decided to lecture on the *second* half of the Third Critique during my time in Dublin. For their utterly disparate philosophical inspiration and friendship, I am also very indebted to Alain Badiou, Paolo Virno, Eric Alliez, Peter Hallward and Andrew Benjamin. Last but never least, to Nina: *compagna*.

ALBERTO TOSCANO

# Preface

This book was principally composed between 1999 and 2002. In hindsight, it reflects my appraisal of a certain philosophical conjuncture (the debate over contemporary materialism in European philosophy), as well as the site of its production (the philosophy department at the University of Warwick). In terms of the conjuncture, it registers the effects of a shared enthusiasm at the possibility of a joint resurgence in constructive, ontological speculation, on the one hand, and a vibrant relation to contemporary scientific thought, on the other. The locus of this convergence (whether fantasmatic or not, I shall let the reader decide), was a unique intellectual environment which combined a rigorous curiosity in the possibility of conceptual invention and renovation with a rather wanton disdain for the rigidities of disciplinary definition – above all that stultifying machine for institutional reproduction which is represented by the distinction between ‘analytics’ and ‘continentals’. It would not be elegant to wax nostalgic about such an anomalous space where, for reasons more aleatory than contrived, a small group of people plotted the escape from the mortifying philosophical consensus by discussing Foucault with Dennett, Laruelle with Quine, Macherey with Brandom. That space has been pretty much curtailed now, and the energy that drove it, save for a few exceptions (namely the journal *Pli*), elsewhere disseminated.

Having landed in such a situation, my initial project was, in a fit of inevitable and salutary hubris, to draw the philosophical genealogy of a certain, principally Deleuzian, materialism, with a specific focus on post-Kantian biophilosophical thought. Much work had been done, at Warwick and elsewhere, elaborating and expanding the conceptual detail of Deleuze and Guattari’s work, or applying it to disparate phenomena, or even entering it into unnatural participations with non-philosophical practices, from ballistics to jungle music. Much effort had also been expended in retracing Deleuze’s own apprenticeship in philosophy, effectively canonizing the heretical lineage he had sketched out in his numerous interventions into the history of philosophy. Both these enterprises continue to this very day, though largely captured by a stultifying editorial *dispositif*, churning out primers, readers and introductions with a kind of grim obstinacy. When this work was first conceived

my aim was not to retread, in an inevitably impoverished manner, the terrain covered by Deleuze, but rather to inquire as to the historico-philosophical bases for his seemingly anachronistic revaluation, alongside Guattari, of a philosophy of nature. From Schelling to complexity theory, then. Soon after a somewhat disorienting immersion into the former's *Naturphilosophie*, I became increasingly disheartened with this biophilosophical orientation. A kind of Deleuzian doxa was in the offing, with its vitalist and mechanist wings. Which of these were the Left Deleuzeans, which the Right, I am not certain, but, despite some valuable work on either side, it struck me that the available responses to the challenge of a transcendental materialism – both at the historico-philosophical and the strictly conceptual level – were insufficient (I have argued this more at length in my preface to Alliez's *Signature of the World*). The past few years of writings on and around Deleuze, despite some heartening exceptions, have abundantly confirmed my suspicion.

The aim of this book is not to defend the Deleuzian corner in the struggle over the heart of materialism, a struggle that some plausibly see as pitting him against Alain Badiou. Indeed, Badiou himself, in his review of *The Fold*, has articulated this combat between the cosmic animal and the stellar matheme as an almost immemorial differend between two estimations of the importance of individuation, constituting two rival philosophical lines: 'The real question ... is that of singularity: where and how does the singular meet up with the concept? What is the paradigm of such an encounter? If Deleuze likes the Stoics, Leibniz, or Whitehead, and if he does not much like Plato, Descartes or Hegel, it is because, in the first series, the principle of individuation occupies a strategic place, which it is denied in the second. The "Leibnizian revolution" is greeted with rare stylistic enthusiasm in Deleuze's supple narration, as the "wedding of concept and singularity".' Rather than orchestrating a defensive manoeuvre, my aim in this book is twofold: first, by means of a kind of discontinuous and admittedly experimental philosophical archaeology (whence the small-minded, if inadvertently flattering, accusations of 'continental science fiction'), to excavate and reconstruct a notion of crucial importance to any contemporary resurgence in ontology; second, and perhaps more importantly, to *reproblematize* the work of Deleuze in terms other than his own, showing how, in reinventing the problem of individuation, it supplies a radical and novel response to that antinomy of bourgeois thought which Kant had emblematically deployed in his own discussion of natural purposes.

One of the potential advantages of such an exercise is that it allows us to undermine those tendencies in contemporary philosophy that are

either hypnotized by the supposed breakthroughs of scientific modeling and its promises of a new, omni-comprehensive materialism or, alternatively, find themselves absorbed by their own falsely inhuman interiority, recasting the ideology of qualia in pedestrian hallucinations. It might also serve as an antidote, I hope, to the fusion of these two stances, most obvious in the entire discourse of autopoiesis, ultimately amounting to the presentation, in 'scientific' guise, of a humanist and organicist philosophy whose ethico-political extrapolations make us hanker after the far more sophisticated, and indeed progressive, organicism of Hegel. Indeed, given the insistent attempt to map and metaphorize contemporary social struggles and political inventions in Deleuzo–Guattarian jargon, the work undertaken in these pages could also function to specify the rather rigorous parameters of their philosophy of anomalous individuation, a philosophy which cannot be enlisted, save for gross distortion, to serve the expressionist spontaneism or quasi-behaviourism of some of Deleuze and Guattari's epigones.

To think beyond mechanism and vitalism is no mean feat, and it is one that has rarely been accomplished either in philosophical or political thought. The second part of this book is an attempt to identify some of the elements that might come to constitute, in one way or another, such a thought. To do so is obviously not merely to re-present some untainted core of a 'Deleuzean' philosophy, but to construct a conceptually consistent proposal. As I hope to show in Chapter 6, the prism of anomalous individuation allows us both to jettison the more or less emanationist programme to which Badiou erroneously reduces Deleuze's philosophy of difference, and to demonstrate that it is not enough to separate – as Slavoj Žižek has recently done in *Organs without Bodies* – a productivist and vulgarly materialist Deleuze, halfway between La Mettrie and Kautsky, from the 'Lacanian' materialist of the impassive event that surveys the pages of *The Logic of Sense*. It is in the notion of production itself, cast and recast in his confrontation with structuralism, that we are to look for the anomaly in Deleuze. It is production which, as a theatre of individuations, disparations and asymmetries, permits us to think a transcendental materialism that would be neither a fanaticism of the act nor a determinist dogmatism.

The second part of this book unleashes a whole set of methodological issues which I hope to address in future research. In many of the authors I discuss, what is perhaps most arresting is the *meta-philosophical* effects elicited by the anomalies of individuation. Nietzsche's *interpretation*, Peirce's *abduction*, Simondon's *transduction* all spring to mind here, framed by the passage from the Kantian critique of *construction* to the

*constructivism* that Deleuze and Guattari present as the essence of philosophical praxis (a recent article entitled 'Philosophy and the Experience of Construction', together with 'Aleatory Rationalism', an essay on Badiou co-authored with Ray Brassier, constitute the blueprint for this future research). Indeed, one of the genuinely unintended results of this work was to bring home the idea that the philosophy of individuation, far from happily resulting in a muscular materialist ontology, confronts us, in the final analysis, with a disputation about the very nature of thinking itself. Deleuze's rather disconcerting portrait of the philosopher as *pure individual*, broached in the Conclusion, is just such a theory of thought.

I presume this outcome will be most disappointing to the more scientifically or empirically inclined (and would have hardly raised my spirits at the outset of this research) but I think, even in its slightly enigmatic character, it is true to the specificity of Deleuze's project, which is to say, true both to its captivating boldness and to its potential limitations. Any extension of the project undertaken in this book would also need to relate the anomalous to the dialectical. Starting out from the Kantian matrix which is plainly indispensable for Hegel's logic, philosophy of nature and political thought – the matrix whose delineation and critique is the object of Part I – it would be obliged to show how a focus on individuation might prepare a critique of the organicist presuppositions of the dialectic (and of dialectical theories of organization), taking into consideration the various manners in which Hegel himself manipulates and surpasses the antinomy between the vital and the mechanical.

If the question that runs throughout this work is, in retrospect, 'What is living and what is dead in biophilosophy?', then the somewhat gnomic and provocative answer I have sought to give is that what is living (the sundry intuitions of a unitary, cosmic, totalizing life, however 'anorganic'; the qualitative phenomenologies of organic immanence) is what is dead, and what is dead (the abstract, formal determinations of an ontology of anomalous individuation indifferent to the vital and the organic) is what, paradoxically, is living.

## *A Francesca e Roberto*

*If some magical power were capable of modifying the reproductive faculty itself, of transforming Nature's original model or of making additions to it, we should no longer know from what original Nature had begun, nor how far the alteration of that original may proceed, nor into what grotesqueries of form species might eventually be transmogrified.*

Immanuel Kant

*Je cherchais à entraîner l'organisation dans des voies insolites.*

Étienne Geoffroy Saint-Hilaire

*Philosophy is invention beyond the limits of experience.*

Friedrich Nietzsche

# Introduction: From the Intelligible to the Genetic

## The ontology of anomalous individuation

The starting point of this investigation into the contemporary stakes of a philosophy of individuation could be expressed in the seemingly banal, even innocuous, question that Heidegger regarded as the refrain of 'Western' metaphysics: 'What are beings?' For those not prone to the pious wonder (or simulation thereof) that has adorned the return of ontology to the forefront of philosophical interrogation, such a question, when not answered in a Quinean spirit with a hearty and democratic 'Everything', seems to announce nothing less than the paralysis of thought, faced with a speculative demand as crushingly vague as it is all-encompassing. Invoking the sanctity of tradition or the responsibilities of thought in the face of an inscrutable donation, a gift of being, bodes no better. And yet, behind what initially appears as a woefully under-determined question, lies the vital matter of philosophical confrontations, of shifts and redefinitions whose intensity and impurity bear witness to the polemical character, at once contingent *and* determinate, of philosophical practice. It is with one such polemical shift that this book is concerned.

In terms that admittedly are yet insufficient to capture the specificity of our theme, this shift is that between an ontology of *individuality* and an ontology of *individuation*. The guiding traits of this shift, together with its consequences for what we may understand by the term 'ontology', will only acquire their definite physiognomy as we advance in our investigation. At this juncture, it is nevertheless necessary to sketch briefly the twofold approach that this inquiry will take towards its primary object: the problem of individuation, its transformations and contemporary import. The first part of this book will involve a textual and historical, or archaeological, inquiry into the modern emergence of what we will hazard to call the *genetic modality of individuation*. The key locus of this emergence will be identified as Kant's encounter with the problem of the organic, as it is formulated and transformed between the *Critique of Judgment* and the writings collected as the *Opus Postumum* (Chapters 1 and 2). The term 'problem' should be understood here, and



throughout, in two senses: firstly, in the vulgar connotation of a difficulty or even a threat, encroaching upon the coherence of a given philosophical orientation, and secondly, in the positive or constitutive sense given to the notion of 'problem' by Deleuze; that is, as the impersonal field of singularities out of which thought draws its localized solutions, the latent structure that elicits the dynamisms of conceptualization.<sup>1</sup> As I shall demonstrate with regard to Kant, it is with the irruption of the problem of the organic (as a problem in the first sense) that Kant's thought experiences (or perhaps we should say 'suffers') the constitution of a new problem in this second sense: the problem of individuation qua (self-)organization. The inability truly to incorporate the problem of the organic either within the Critical system itself or as a component in a new problematic – attested to by Kant's struggles in the *Opus Postumum* (Chapter 2), as well as by Nietzsche's destructive critique in his early notebooks on *The Concept of the Organic since Kant* (Chapter 3) – will be exhibited as the negative site of a new philosophical intervention. This intervention, prefigured in various strands of post-Kantian philosophy, from Schelling to Peirce, but only truly carried out in the works of Gilbert Simondon and Gilles Deleuze, will radically transfigure the presuppositions and results of critique and of its concept of the transcendental, by conferring full rights upon that genetic modality of individuation which is only problematically inscribed in Kant's own writings.

Having dealt with the circumstances and consequences of the irruption of individuation as genesis within Kant's critique – specifically, with the formulation of a distinction between autonomy and heteronomy as Kant's provisional and problematic response to this question, as well as with the transformation or collapse of this response in his own 'post-critical' writings and in those of Whitehead and Nietzsche – I aim to inquire into how an alternative ontological stance and epistemic configuration can incorporate the problem of the organic, the problem of a *genetic modality of individuation*, in a manner transversal to the distinction between autonomous (self-organizing) and heteronomous (mechanistic) modalities of individuation. This post-Kantian, and to a great extent anti-Kantian, stance will be surveyed under the heading of an *ontology of anomalous individuation*, and will be elucidated with specific reference to a conceptual thread running through the work of Deleuze, but complemented and enriched by insights gleaned from the writings of Peirce and Simondon. As Part II of the book will endeavour to clarify, whilst the encounter with the problem of the organic elicits the specific form of Kant's distinction between autonomy and heteronomy,

the dissolution of this distinction within the ontology of anomalous individuation entails the jettisoning of the organic as an instance of *autonomous* individuation, whilst also calling for a thoroughgoing reconsideration of the ontology of organization in general. Chapters 4 and 5 will consider models of individuation that positively evade the distinction between autonomous and heteronomous individuation in Kant, models that we will refer to as *anomalous* insofar as, with varying degrees of radicality and conceptual consistency, they seek to map the material and cognitive operations that lead to the constitution of individuals without having recourse to *principles of individuation* (immaterial laws, eminent entities or separate aspects of being); such principles would both account for the real consistency, and precondition the epistemic seizure, of individuals *as* individuals. The two principal models we will consider, Peircean *habit* and Simondonian *transduction*, eschew the distinction between autonomous and heteronomous individuation by suspending the presupposition, at once ontological and epistemic, of constituted terms determining the being of individuals; instead, they aim to account, amongst other things, for the very emergence of the difference between autonomy and heteronomy. However, it is only with a critical investigation of the reconfigured role of individuation as genesis, within the ontological problematic of Deleuze, that our philosophical archaeology of the genetic modality of individuation will receive its proper complement. The 'crisis of critique' exposed in Chapter 3 will be relayed by the constitution of another problematic of individuation, in the guise of a new metaphysics whose co-ordinates may be found in the concepts of difference, intensity and virtuality, and whose methodological aspect takes the name of constructivism. Not only will this part serve as a complement to the archaeological inquiry undertaken in Chapters 1, 2 and 3, but, in line with a certain relativity (though by no means relativism) of problems, it will become evident how our understanding of the crisis of Kantian critique, as a crisis borne by the problem of genesis and not by the problem of organic totality, is one that can only take place from the ontological standpoint of anomalous individuation. 'Anomaly' here designates the *unequal* or differential ground of production that lies beneath the actual, constituted, individuals which provide the objects of the philosophies of representation.

So much for the shape and sequence of our investigation. In the remainder of this introduction we shall be concerned with laying down some of the historical and terminological foundations necessary for the comprehension of what is meant here by the philosophy or ontology of individuation. In this respect, and unlike the rest of the book, what

follows will be concerned with doctrinal history, with questions such as: What is 'traditionally' meant by the problem of individuation? or: What are the principal transformations undergone by the concept of individuation prior to the Kantian formulation of the organic? The general rubric of the following remarks, to borrow once again from Heidegger, could thus be designated as 'Being and Thought'. Hopefully, the characterization of the way in which the problem of individuation recasts the relationship between these two 'poles' of philosophical activity will prepare the way for a certain revision in what we might understand by 'ontology'. This revision will be our concern both in Chapter 6 and again in the conclusion, where we shall inquire into the metaphysical, or ethical, effects of the idea of anomalous individuation.

### **Is there a science of the individual?**

To begin with, it is necessary to provide some kind of characterization of what the problem of individuation has generally been taken to signify. This problem can be initially stated, in all its indeterminacy, as: What makes an individual an individual? The weight of this indeterminacy is felt most acutely in the nature of the 'makes', which can and has taken myriad philosophical forms, from the perceptual to the phenomenological, from the theological to the corpuscular, and perhaps most importantly, manifests a tendency to oscillate between the four Aristotelian causes (material, formal, efficient, final). It has been argued that the notion of individuation emerged alongside an image of philosophy as a search after conditions of intelligibility, whose central requirement was that of accounting for the division or differentiation of the real into distinct, discernible or determinate entities. This attempt at determining the 'correlates' of thought, and at securing this grasp by accounting for how thought could carve the real at its joints (how thought and being could ever enter into a relationship of adequation with respect to determinate unities), has of course taken innumerable forms, expressed by such eminently philosophical questions as: 'What is *an* object?', 'What is *a* thing?', 'What is *a* name?'

In this light, the Aristotelian configuration of the problem of individuation could be indicated as its inaugural, albeit unachieved, statement, containing *in nuce* several aspects of a debate that in many respects is coterminous with the history of ontology. Moreover, within this configuration, the investigation of the processes underlying the constitution and destitution of individual forms is always subsumed, in the last instance, by the categorial determination of the relationship between

the universality sought by knowledge (or of what can be predicated regarding the real) and the particular cases encountered in an empirical domain. The question of individuation is thereby almost immediately assimilated by the question of specification. As Bruno Pinchard writes:

There would not have been a thought of individuation without the philosophical decision, characteristic of Hellenic thought, to identify *science*, *intelligibility*, and the search for the *universal*. The reciprocity between the requirement of universality and the constitution of a scientific object is the absolute condition of the Aristotelian reflection on individuation. Moreover, this condition seems strictly required for any philosophy of individuation.<sup>2</sup>

What is at stake in this intersection of individuality, universality, reality and intelligibility? In Aristotle, we are dealing with (at least) two modalities of individuation. I have already referred to one of these modalities as *genetic*. It may be registered in Aristotle's physics, morphology and zoology, and more generally in the very idea of a science of generation and corruption. The other is *epistemic*, and it is deployed in Aristotle's theories of abstraction and predication. Without venturing here into the vicissitudes of the interaction between these two modalities, we must, at the very least, note the manner in which it is sustained throughout by a hylemorphic theory of individuation. Theoretical experience is always confronted by composites of matter and form. *Science*, which operates by the twofold practice of abstraction and predication, is concerned with the intellection of substances, or, more drastically, with the extraction of form. Yet individuality itself, in both its genetic and epistemic guises, is distinguished by its dependence on matter, by its being inextricable from composition. This is the sense in which matter itself could come to be considered as the principle of individuation (most famously in Aquinas' notion of *materia signata*). This twofold requirement of universality, on the one hand, and of a material principle of individuation, on the other, is the impasse proper to Aristotle and the heirs of his understanding of individuation.

Whilst the order of knowledge or predication, with its threefold system of nomination, definition and judgment, can be said to begin with the impure perception of singular composites – which is why it is characterized as *abstraction* – nothing, that is to say nothing essential, nothing of the order of *οὐσια* can be predicated of the individual itself, whose being is irredeemably marked by matter and accident. As Porphyry, setting up the ladder of the 'predicables' that would come to be

known as 'Porphyry's tree', states in the *Isagoge*, his introduction to Aristotle's *Categories*, individuals, 'which are predicated of one alone ... are infinite':

This is why Plato exhorts us to stop going down from the most general to the most specific, to go down through the intermediary levels and to divide by differences. He tells us to leave the infinite [individuals] alone. For there is no knowledge of them.<sup>3</sup>

As Aristotle had already noted in *Metaphysics Z*: 'the definition of an individual is always precarious, and, in effect, a veritable definition is not possible'.<sup>4</sup> Definition, in this instance synonymous with knowledge, can only ever hope to extract a substantial identity, or predicate a formal being, from the hylemorphic composites that constitute the object of physics; it can never attain true knowledge of these composites themselves, 'as such'. Even in its physical use, where it functions both as 'substrate of interaction and as principle of distinction', the material principle of individuation can never permit the integral incorporation of individuals into the purview of science.<sup>5</sup> The entity (or composite substance) that actualizes a form or instantiates a species, and about which there may be a determinate act of predication, is nevertheless *this* entity only through the inscrutable work of matter. Matter itself is unknowable; unless, of course, it is already conceived as individuated (into atoms, particles, properties, and so on). But in this case, the entire argument crumbles under the weight of the many critiques that have been levied against it (from Scotus to Simondon), disputing it on the grounds that it always surreptitiously *prepares* matter *for* form, thus corrupting the separation *in principle* of the two sides of the composite. As Pinchard concedes, matter 'is a principle as active as it is unknowable, [a] discontinuous numerical quantity, which is the foundation *in progress* of individual diversity. The mystery of Aristotelian individuation lies here: the unthinkable is its motor, non-being is its cause.'<sup>6</sup> Thus, the articulation of being and thought under the aegis of the Aristotelian ideal of intelligibility results in the impasse that the only intelligibility of the individual, its only science, depends on its individuation in and by matter, the unintelligible *par excellence*.

According to Pinchard's presentation of the Aristotelian tradition, we are thus faced with an overdetermination of the *genetic* modality of individuation by the *epistemic* one. In genesis, as in the knowledge and predication thereof, the principle of individuation turns out to reside in what is most obscure, matter. The determination of what

is proper to thought – the binding of thought to the question of universality – generates an impasse in the interrogation of the relationship between being and individuality. This relationship becomes explicitly thematized only within mediaeval Scholasticism, and specifically in the work of Duns Scotus. In light of recent scholarship focusing on the contribution of Scotist philosophy to the genealogy of modern metaphysics conceived as a philosophy of representation, we are in a position to add another element to our preparatory survey.

### Univocity, haecceity and the birth of the object

The Scotist revolution, as regards both ontology and individuality, could in certain respects be characterized as a radicalization of the ideal of intelligibility belonging to Aristotelian science. In this sense, and despite the significance that Deleuze accorded it as a precursor of an ontology of difference, Scotus's philosophy is fiercely *epistemic*, or rather, it is altogether indifferent to the question of production (as opposed to divine creation), constituting instead a thoroughly *abstract* ontology.<sup>7</sup> This Scotist revolution is inseparable from a certain interpretation of the thesis that affirms the convertibility of being and unity, a thesis much later vehemently supported by Leibniz, and distilled into his well-known ontological motto: '*ce qui n'est pas un être, n'est pas véritablement un être*', what is not *a* being, is not truly *a being*.<sup>8</sup>

In contrast to the Aristotelianism, exemplified in Porphyry, that left both being and individuality outside of the realm of the predicable – the first as supra-generic or equivocal, the second as infra-specific or unintelligible – Scotus seeks to give full rights of metaphysical citizenship both to being *and* to individuality, in an attempt to eliminate the gap between (individual) reality and (conceptual) intelligibility still present in Aristotle, thus setting the stage for Ockham's nominalism as a philosophy of radical singularity, of individuality without a principle of individuation.<sup>9</sup> In the midst of a treatment which also provides a strong critique of the material principle of individuation,<sup>10</sup> Scotus forwards the radical thesis that nothing beyond the individual 'itself' – or rather, what he calls a 'real factor' within the individual – can account for its individuality. In so doing, he also presents us with a cross-section or recapitulation of the alternative stances to the problem of individuation thrown up by the tradition. Following the order of questions in his *Ordinatio*, the principle of individuation is *not*: (1) substance; (2) negation; (3) existence; (4) quantity; (5) matter. What Scotus provides as the principle of individuation, what he somewhat misleadingly calls the *ultimate determination*

of form – and which his followers would rechristen with the rather more fortunate name of *haecceity* – is the non-decomposable factor that ‘reduces’ an indifferent common essence (for example, humanity) to its thisness (for example, Socrates).

At first, this seems a meagre result for a philosophy that has been said to stake a legitimate claim to the status of a revolution. Yet it is not just in the critical destruction of the inherited principles of individuation that the force of Scotus’s argument lies, but precisely in the claim that the singular or individual is intelligible *as such*; that, whilst the universality of abstraction is itself a product of intellection, both the indifferent essence of a being (its *natura communis*) and its thisness (*haecceitas*) are positively real and intelligible. Neither of them, we must also note, are explained by *solo numero* difference: the former is the bearer of a quidditative unity that is less than numerical, whilst the latter is itself the reason for numerical difference.<sup>11</sup>

Arguably, this result is only a relatively minor corollary of what, if we are to follow Deleuze, is Scotus’s principal contribution to ontology, the thesis of univocity.<sup>12</sup> However, it is in the treatment of the principle of individuation that the convertibility of being and unity becomes most apparent and its momentous effects are most readily witnessed. Metaphysics attains its own unity and independence, from theology and physics respectively, by constituting the unity of its object, in the form of an *ens* (being), *res* (thing), or *aliquid* (something). The two ‘non-categories’ at each end of Porphyry’s tree of predicables, ‘being’ and ‘individuality’, are folded into each other to produce being (in the sense of the French *l’étant*, the Latin *ens*, or the German *das Seiende*) as the proper object of metaphysics. Metaphysics, regarded as a science of the *ens qua ens*, that is, as the science of something ‘common, total, and [absolutely] universal’, is nevertheless threatened by its collapse into indeterminacy in the face of the multiple, equivocal significations of being and unity. Its question thus becomes, to quote Boulnois: ‘What must unity be, so that it may permit being to become the unified object of a single science?’<sup>13</sup> The Scotist answer lies in treating being as a transcendental object common to all of its genera and manifestations. Being, the most common, is thus also the abstract or transcendental form of unity itself, applying both to the *quidditas* or *natura communis* of a being *and* to its *haecceitas* – both of which Scotus in fact regards as entities. Thus, the principle of individuation is overlaid by an instance of transcendental unity (the *ens*) which, as Boulnois remarks, reduces real beings to their concept, or perhaps more radically, makes the two indiscernible. Ontology is constituted here by the abstract concept, in the convertibility of being and unity.

The Aristotelian impasse concerning the science of individuality is thereby recast by Scotus and in a certain sense superseded. Not only is the individual *in principle* integrally intelligible, but the science of being is itself unified by the constitution of the abstract or transcendental unity of its object. What is particularly noteworthy here, apart from the anticipation of the radical transformation that both individuation and univocity will undergo in Deleuze's work, is how Scotus transforms the guiding traits of the Aristotelian philosophy of individuation. The unification of ontology or metaphysics as science is predicated, it appears, on a drastic foreclosure of the genetic dimension, the very dimension that contributed both to the strength and the ambiguity of Aristotle's account. Although cloaked by the opacity of matter, the Aristotelian principle of individuation presented us with the effort to combine the genetic and the epistemic, in other words, with the attempt to attain knowledge of the individuals *in process*. The Scotist account, on the contrary, signalling as it does the superimposition of being and thought in the transcendental unity of a concept of the *ens* within a unified science of ontology, appears quite indifferent to the very problem of a comprehension of genesis. To paraphrase the paradox at the heart of Olivier Boulnois's latest work on Scotus, significantly entitled *Being and Representation*, metaphysics as transcendental ontology only becomes a science when it lets go of a rich and equivocal perception of being in favour of the *aliquid*, the mere 'something' which is marked by neither existence nor non-existence; that is, it only becomes a science of being in its indifference to the real articulations of being, and *a fortiori* to the generations of individuality.<sup>14</sup> It is worth noting that, as we shall see with Deleuze in Chapter 6, one of the key moves within that speculative line which we have referred to as the ontology of anomalous individuation is in fact to persevere in this thinking of the unity of being and concept, but to do so *from the standpoint of individual difference*, thus reversing the primacy of the categorial apparatus (which now becomes the object of a transcendental genesis) and undoing the purely abstract unity of being for the sake of an active affirmation of univocity.

That Boulnois views the outcome of Scotus's project as the veritable commencement of a metaphysics of representation – in a trajectory that finds both its achievement and its crisis in Kant's critique and its notion of the object – is of considerable interest for our own project. For it is precisely in the irruption of the question of production as *heterogenesis* – of production *of* and *from* the different – into the apparatus of critique, that we would like to exhibit the formation of the kind of problematic wherein the contours of an ontology of anomalous individuation begin



to appear. Leaving the details of the relationship between representation, critique and individuation to Chapter 1, let us simply note the specificity of Kant's position *vis-à-vis* the complex of questions outlined above, and conclude with a brief discussion bearing on the effects of the notion of anomalous individuation upon the problem of ontological difference.

If we take Boulnois's bold thesis on board – to wit, that there is a fundamental genealogical continuity between Scotus and Kant – we can comprehend how the project of critique, in its strict limitation of the unity of metaphysics inaugurated by Scotus, prepares the way for the irruption of an ontology of production and a renewed concern with what we referred to as the genetic modality of individuation. By replacing the transcendental unity of the *ens commune* with the transcendental object (object =  $x$ ) construed as the formal requirement for empirical cognition, Kant poses austere constraints upon the univocity of the concept, specifying the modalities and extent of its application, and thereby linking the formal abstraction of the transcendental both to a certain form of process (the determination of the concept) and to the question of its outside (the dependence of the concept on intuition). Or, to put it in a slightly paradoxical manner, by effectuating a certain closure of theoretical cognition, understood in its autonomy from theological legislation and authority, and operating under the aegis of the unity of the concept, it transforms and arguably radicalizes the question of what lies beyond – or to put in Porphyry's terms – 'beneath' the concept.

Introducing temporality into the formation of the concept, Kantian critique brings the question of genesis back into philosophy conceived as a science of the intelligible, but it does so in the guise of a reflection far removed from Aristotelian notions of generation and morphogenesis. The abstract determination of the pure ontology of the object, as inherited from Scotus, is thus tendentially undermined, and the question of the affinity between the productivity of the intellect and the productivity of nature becomes acute; calling forth, with a certain dose of inevitability, as though it had already programmed its emergence, a philosophy of the genesis *of* the intellect to complement the account of genesis *in* the intellect, in the shape of Schelling's affirmation of a parallelism obtaining between nature–philosophy and transcendental idealism understood as complementary approaches to the originary phenomenon of productivity.

It is thus in the process of binding the problem of individuation – together with its 'twin', the problem of universals – to the unity of the concept in representation, that is, by effectively equating the problem of

individuation with that of objectification, that Kant comes up against a new limit to what we have referred to as the epistemic modality of individuation. My claim, which will be substantiated in Chapter 1, is that the experience of this limit is both occasioned and specified by the concept of a natural purpose (or self-organizing entity) in the *Critique of Judgment*. This limit forces Kant into the awkward but eventually fecund position of claiming that, in the organic, we encounter something which is not of the order of the possible, something that judgment cannot bring under a determinate concept, and which therefore, though it might fulfil a symbolic function within the economy of thought, cannot be truly incorporated within the domain of the intelligible. Though there is no science *of* the individual in Kant, science as such is only possible if the individual can be brought under the conceptual jurisdiction of the understanding in the form of an object of representation. However, no science, no universality or intelligibility *stricto sensu*, can be had of the individual as self-organized entity. The limit of the intelligible, however, is no longer to be found solely in the non-categorical inefability of the singular, but is now characterized in terms of *production*. Within the Critical philosophy it is thus the *genesis* of the individual that poses the real problem. It is in this regard that, albeit negatively, Kant's approach to the question of the organic sets the stage for those philosophies that seek to join the interrogation of individual difference to an inquiry into the operations of ontogenesis.

## Individuation and the ontological difference

The paradoxical status of the organic – the non-concept of a non-object, or the idea of a chimera – can in part be explained, as we shall see in Chapter 1, by Kant's fidelity to hylemorphism, a fidelity registered by Martin Heidegger in his crucial essay 'Kant's Thesis About Being'.<sup>15</sup> And yet what Heidegger ignores is precisely the effects of Kant's treatment of the kind of individuality that generates the problem of teleology upon the restricted concept of individuation as objectivity, and in turn upon the 'age-old prevailing meaning of being (constant presence)'.<sup>16</sup> Now, it might at first seem bizarre to claim that the introduction of the problem of the organic can trouble the impact of Heidegger's reading. However, if we consider the manner in which the thesis of ontological difference comes to be stated through and against the philosophy of representation – that is, by taking Kant as the culmination of an entire metaphysical sequence – the consequences of ignoring the problematic status within Kant's own work of genesis in general and self-organization in particular become apparent.

In the essay on Kant, Heidegger arrives at his statement of the ontological difference by excavating the renowned thesis that being is not a predicate. He reads it as saying that being is not a *real* predicate. As he puts it: 'Reality is for Kant not actuality but rather substantiality'.<sup>17</sup> And further: 'We represent and place before ourselves the substantive content of a thing in its concept.' We can thus see how Heidegger wishes to turn Kant's allegedly 'negative/defensive' thesis into an argument for the non-substantiality of being, and further towards the ultimate claim that being (for Kant!) lies beyond representation, that it is not something 'over against', that it *is no thing*. Whence Heidegger's concise statement of the enigma of ontological difference: 'Being cannot *be*. Were it to be, it would no longer remain being but would become a being, an entity.'<sup>18</sup>

We can now schematically summarize the three moments in this doctrinal sketch of the ontology of individuation. In the first, Aristotelian, one, being remains equivocal or supra-generic and individuality lies beneath the grasp of the intelligible. In the Scotist moment, being and unity are convertible in the figure of the *ens commune*, as transcendently unified and unifying object of metaphysics. With the upsurge of the ontological difference, we encounter the figure of being beyond individuality, the being that is beyond 'a' being and beyond all beings. Thus, in terms of the coupling of 'Being and Thought', the 'thesis' (or, more faithfully, the question) of ontological difference runs precisely counter to the initial ideal of intelligibility as a coincidence of thought and being in the individual; an ideal which, as we saw, rests on the aporetic participation of matter in individuation. Heidegger's statement can indeed be read as a call finally to have done with the problem of individuation, with that convertibility of being and unity lying at the heart of Western metaphysics; to suspend the question 'What are beings?' and the ontology of presence and subjectivity that subtend it for the sake of a wholly other thinking. Yet the very formulation of the thesis shows that the being of being is invoked against a seemingly inevitable formulation of the problem of individuation – that is, in terms of the fully present and constituted being of 'a' being, of 'an' entity. In this regard, the formulation of ontological difference may be regarded as the philosophical obverse of the convertibility of being and unity, and its statement as the reversal of Leibniz's motto, which is indeed what Heidegger's own emphasis ('Being cannot *be*') suggests.

But this is also why, rather than constituting the matrix of post-metaphysical speculation, or rather *thinking*, the entire Heideggerian problematic of the ontological difference, so redolent of negative theology,

can be shown to be parasitic on a very definite, and by no means inevitable, model of individuation – to wit, the one that takes the form of representation or ‘enduring presencing’.<sup>19</sup> As I shall attempt to show, especially in Chapters 5 and 6, an ontology founded on the genealogy and critique of traditional approaches to the problem of individuation is by the same token a reconsideration of the ontological difference, such that the latter is not negatively founded on the concession of a kind of regional hegemony to the ontic register of representation or presence. Though it may perhaps be the ‘bad conscience’ of philosophy, as Bruno Pinchard remarks, the problem of individuation is by no means a sort of original sin of thought. Neither categorial specification nor represented objectivity can be deemed to monopolize the speculative seizure of individuation. In other words, it is only by working *through* the problem of individuation – specifically, by assessing both its genetic and epistemic modalities and questioning the convertibility of being and unity – that ontology can attain a concept of differential production or heterogenesis that is *not* based on the negative presupposition of a supposedly ‘given’ but nevertheless ‘fallen’ or ‘corrupt’ modality of individuation (be this representation, presence, embodiment, subjectivity, or whatever). It is only then that the following words can ring true:

Because we think without origin, and without destination, difference becomes the highest thought, but we cannot think it *between* two things, between a point of departure and a point of arrival, nor even between being and beings. Difference cannot be affirmed as such without corroding the two terms which then cease to retain it, without itself ceasing its passage through assignable terms. Difference is the true logos, but logos is the errancy that suppresses fixed points – indifference is its pathos.<sup>20</sup>

In order to provide some purchase on what distinguishes the ontology of anomalous individuation from the theme of the ontological difference, as well as from the other approaches to individuation rehearsed above, let us now anticipate, by way of three cardinal theses gleaned from the work of Gilbert Simondon and Gilles Deleuze, the basic traits of the philosophical approach that will be the object of Part II of this work.

(1) *Thesis of Ontological Excess*. Being is both more than one and less than, or not yet, one. It is *preindividual* and exceeds its differentiation into bounded individuals, whether these be objects, subjects, organisms, or whatever. The status of being is that of a *problematic field*, populated by

inconsistent tendencies or potentials of which constituted individuals are solutions. These solutions are always partial and relative, remaining open to the problematic or 'inconsistent' excess of being. In other words, individuation is inexorably caught up in a dialectic of deficit and excess.

(2) *Thesis of Asymmetry*. The ontology of anomalous individuation is a philosophy of production, of what Miguel de Beistegui has perspicuously termed onto-hetero-genesis. It does not construct its account of individuation by extrapolating from constituted individuals to constituting processes, that is, by assuming a relationship of resemblance or analogy between formed, bounded entities and the operations that produce them. Inasmuch as individuating operations resolve inconsistencies in preindividual being, an understanding of them in terms of the primacy of individuals as products or solutions would obfuscate the very question of production. All the categories hitherto employed to grasp the individual are themselves subject to this primacy of ontogenesis. Subject and Object, Space and Time, Matter and Form, Universal and Particular, and perhaps above all, Being and Beings, must all be grasped as arising in individuation, from a preindividual being that is best described in terms of its problematicity and metastability. With regard to the processes of individuation themselves, the concepts designed to express them must be operational or relational concepts that do not rest on the predetermined properties of constituted individuals.<sup>21</sup> Moreover, any attempt at fashioning a concept of individuation starting from individuals themselves ignores that it is never monadic or independent individuals that are the outcomes of ontogenesis, but rather individual–environment complexes.

(3) *Thesis of Anomalous or An-archic Individuation*. The project of grounding the constitution of individuals in a *principle* of individuation is founded on an illegitimate inversion of ontogenesis, resulting in ascribing to a term *within* the process, most often a term reputedly untouched by the operations of individuation, the qualities and properties required to account for constituted individuals. Both Aristotelian hylemorphism (in its presupposition of form and matter as distinct terms within the operation of individuation) and atomism (with its presupposition of basic indivisible elements at the heart of all material transformations) err in this respect, providing principles which, whilst they appear to address individuation, are but a redundant reflection of the properties and qualities *already assigned* to individuals themselves. The 'ground' of individuation is instead to be found in unequal tendencies and disparate relations which have themselves been

generated by prior processes of individuation, and whose integration or reduction is to be considered as the sufficient reason for the production of provisionally delimited, actual individuals.

In light of these three theses, difference does not lie *between* being and beings, but is rather to be located in those operations that make the preindividual pass into the individuated. In the wake of the critiques of individuality offered by Simondon and Deleuze, ontology is reconfigured as a theoretical practice which cannot remain satisfied with either denying the hegemony of the individual or invoking its absolute, inscrutable other, with suspending the ontic authority of representation or clamouring for its apophatic annihilation. Instead, it is aimed at espousing, articulating and counter-effectuating the very movement of the constitution of individuality, something that, as we shall see in the discussion of the concept of transduction in Chapter 5, is not to be separated from the movement constituting thought itself.

To recapitulate in a somewhat polemical register, once again anticipating insights that will only be corroborated by our more detailed conceptual investigations in Part II, the ontology of anomalous individuation can thus be regarded as: (1) an inversion of Aristotelianism: genesis precedes and produces intelligibility; (2) a radicalization of univocity: being is now conceived as differential production and affirmation, rather than indifferent abstraction; (3) a transformation of the transcendental: passing from conditions of *possibility* to conditions of *realization*, the transcendental is reconfigured as an asubjective and ontogenetic preindividual field.

But these statements still remain imperfect approximations of our theme, depending as they do on an excessively abstract demarcation from past paradigms within the philosophy of individuation. To grasp the real stakes at play in the philosophical configuration we have chosen to call the ontology of anomalous individuation, it is necessary to approach it at a far more definite level, where it produces concepts and constructs operations that truly shift the traditional terrain of the interrogation of individuality. In order to attain this level, however, we must first excavate the singular matrix out of which a new paradigm in the philosophy of individuation may emerge. As we hope to show, whilst the Aristotelian, Scotist and Heideggerian moments sketched above retain their significance and, in varying ways, their influence upon our approach, it is starting from a far more circumscribed problematic – one that in fact is not explicitly concerned with the classical problem of individuation – that the constitution of a contemporary ontology of

individuation can be sketched out. This modern problematic is that of self-organized beings, as set out by Kant in the *Critique of Judgment*. In Part I, by considering this aspect of Kant's work and some critical responses to it, we will thus be concerned with drawing out the consequences of thinking individuation as *organization*, as well as with the effects of positing the *organic* as the *anomalous* instance of an autonomous organization in the heteronomous world of purely mechanical causes and our knowledge thereof. Whilst we will exhibit the way in which Kant's separation of autonomous and heteronomous modalities of individuation is the object of numerous and varied philosophical critiques, we nonetheless want to demonstrate that the very notion of a being in nature that *individuates itself*, in the specific form given it by Kant, is the harbinger of a momentous revolution in the philosophy of individuation, one that will take it from an almost exclusively epistemic focus to a sustained engagement with the question of ontogenesis *qua* heterogenesis.

Thus, it is only after Kant – which is to say beyond Kant and, in a sense, despite Kant – that philosophy can deploy itself as a 'theatre of production'. As Part I will lay out, it is the crisis opened up by the anomaly of the organic that leads thought to interrogate a domain of preindividual productivity which is neither mechanical nor vitalist, and in turn to consider philosophical activity itself not as contemplative *theoria*, but as itself an individuating process, a practice of *construction* that seizes, relays and reconfigures non-philosophical processes of ontogenesis. As Part II will demonstrate by addressing the writings of Peirce, Simondon and Deleuze, philosophy becomes a theatre of production to the extent that the relationship between Being and Thought, between ontological processes and philosophical concepts, is freed from the presuppositions of individuality and given over to the manifestation, investigation and construction of the operations of individuation. The suspension of principles of individuation thus entails the loss of the transparency of categorical capture and the abandonment of the mission which demanded that philosophy guarantee the intelligibility of the real. To borrow from Deleuze, and anticipate our elaboration of these ideas in Chapter 6, this means that, with regard to the problem of individuation, philosophy no longer reflects (upon) constituted individualities, but must rather *dramatize* the processes of individuation.

## **Part I**

# **Kant Beyond Kant, or, The Anomalies of the Organic**



*This page intentionally left blank*

# 1

## The Paradoxical Object: On Self-Organizing Beings in the *Critique of Judgment*

The generator insofar as it generates, disregarding everything else, is distinguished from the generated insofar as it is generated, disregarding everything other than the generated. For it is unintelligible that the same thing generate itself.

Duns Scotus, *Ordinatio* II d.3, Part I, q.4, 110

Why not stop our investigation of nature (even though we have not yet advanced far in it), or at least suspend it for a while, and try first to find out where that stranger in natural science, the concept of natural purposes, may lead us?

Immanuel Kant, *Critique of Judgment*

The search for an appropriate definition of the organism does nothing here but reflect the difficulty of naturalizing it, of making it into a legitimate physical concept – being as the fact of organization imposes itself to both internal and external observation – and to give so-called internal teleology an image which does not immediately become that of the external teleology of an immaterial principle.

Claude Debru, 'L'Introduction du concept d'organisme dans la philosophie kantienne: 1790–1803'

### 1.1 The anomaly of self-organization

In the wake of neo-Kantian interpretations, the Critical philosophy has often been neatly partitioned, in line with the distinction between the practical and speculative interests of reason, into an epistemology of scientific research and a theory of moral action.<sup>1</sup> The *Critique of Judgment*,

approached from the vantage point of Kant's own projected metaphysics of nature, or from the related position of an ontology of individuation, proves such a fertile text precisely on account of its capacity to force thought out of any purported alternative or complementarity between theory and action, and into a reckoning with the speculative foundations and the momentous consequences of the commerce which Kant deploys between the two interests or domains of reason, pure and practical.<sup>2</sup> Specifically, it allows us to circumscribe within Kant's work, in the midst of its inner tensions and developments, the constitution of a problem – that of *self-organization* – which provides the enduring, if sometimes unacknowledged, matrix through which much of post-Kantian philosophy has approached the problem of individuation.

The concept of natural purpose, in its particular determination as intrinsic physical end, is perhaps the most challenging of those symbols that allow Kant to tame the recalcitrant (and potentially fatal) separation established between the deterministic sense world and the supersensible reign of free choice.<sup>3</sup> Although the idea of *self-purpose* is, strictly speaking, 'restricted to the sphere of the ethical ... it possesses a *symbolic counterpart* in the phenomenon of the organism.'<sup>4</sup> Though the concept of a natural purpose or self-organizing being, which persists problematically through to the *Opus Postumum*, is enlisted in order to harmonize our representations and scientific theories, on the one hand, and our supersensible 'destination', on the other, it seems to escape the strictly intrasystemic function accorded it by Kant and rebound back onto both the theoretical and the practical realms, staking demands that surpass the aims originally charted in the preface to the first Critique, aims which are nonetheless not to be so easily dismissed as 'subreptions'.<sup>5</sup> The horizon of our interrogation in this preparatory, historical part of our research is thus perfectly encapsulated in the following question, posed by Zammito: 'Can Kant's cognitive system endure the *actuality* of the anomaly of organic forms within a presumably systematic empirical "science" and more fundamentally within a presumably systematic "transcendental logic"?'<sup>6</sup>

Before we proceed further, it is worth remarking that Kant's terminology is not altogether consistent when it comes to the issue of organization in nature. Whilst in the *Critique of Judgment* Kant writes of *natural purposes* and *organized beings*, in the *Opus Postumum*, which we will deal with in Chapter 2, he opts for *natural machines* and *organisms*. Though, as Claude Debru exhaustively demonstrates in an excellent study,<sup>7</sup> the concept of organism only appears with the *Opus Postumum*, I will use it along with those of individual, self-organized being and natural purpose (intrinsic physical end) to designate the problem of the *evidence of life*.

Debru is correct in remarking that the use of the term organization, as opposed to organism, is a sign of the *Critique of Judgment's* concern with the *form* of purposiveness and its symbolic potentiality, and not with providing an 'indirect-transcendental' foundation to an aspect which pertains to the ontology of nature (as may be argued for the *Opus Postumum*). To the extent that the project of a transition from metaphysics to physics transgresses the regulative limitations of a preoccupation with judgment, the *Opus Postumum* can be seen as a recognition of the limitations of transcendental philosophy, displaying a tendency in Kant's late thought towards what Deleuze calls 'transcendental empiricism': *not* an account of the conditions of possibility of *general* experience, but an investigation into the (formal and ontological) conditions of *specific* phenomena – the conditions of their *realization*. We will return to this question in Chapter 2, Section 2.4.

What Kant's confrontation with the problem of natural purposes seems especially to unsettle is the marriage of (Newtonian) physics, as the only transcendently justified system in the natural sciences, and of theism, as the only legitimate speculative position *vis-à-vis* the order of nature and its purposive consonance with our cognitive capacities, and, above all, our moral destination. In a wider sense, as Pierre Kerszberg rather dramatically puts it, it is here that 'the explosion of reason's sphere makes its limits themselves burst into pieces ... Kant discovers that there are certain kinds of sensible objects which, as particulars, are presented to us in such a way that they completely escape the grip of reason.'<sup>8</sup> What we are confronted with in the 'Critique of Teleological Judgment' is thus an overturning of the very reversal effected by the Copernican revolution, such that in the *Critique of Judgment* and the *Opus Postumum* the evidence of something beyond the confines of cognition, in this case organized *life*, begins to make (excessive) demands upon transcendental reflection.<sup>9</sup> Merely to sketch this argument it will first be necessary to exhibit the salient moments in Kant's argumentation. This will involve omitting from our admittedly instrumental reading much that in Kant's text prepares the appearance of natural purposes, though hopefully this will not distort the implications that other aspects of Kant's doctrine may bear upon the target of our discussion. We will thus focus solely on the consequences of the problematic modality of individuation ascribed to natural purposes for Kant and for the ensuing debates in the ontology of individuation, and *not* on the strictly teleological debates which form the explicit object of the second part of the *Critique of Judgment*. As we hope to show throughout this chapter and in the remainder of this work, it is only on the basis of a certain thematization and determination of individuality within nature that problems such as those of teleology can even be posed.

We will therefore seek to demonstrate how Kant's formulation of the problem of self-organization, based as it is on the unstable status of the organism as a paradoxical object, threatens the hegemony of a representational (or objective) principle of individuation. In the *Critique of Judgment*, the effect of the 'conflict of individuations' – pitting the determinant judgment of linear causality in the object against the reflective judgment on recursively self-organized beings – will be to establish, albeit at the level of maxims alone, an uneasy cohabitation of mechanistic and teleological modes of individuation. Though aimed at forging a complementarity of principles for the sake of empirical investigation, insofar as it sets the distinction between autonomy and heteronomy at the heart of the problem of individuation, Kant's discussion functions as the exemplary matrix for the debates between 'mechanists' and 'vitalists' that, after myriad metamorphoses, still seem to trouble the field of biophilosophy to this very day.<sup>10</sup>

It is imperative to note at this point that the meaning ascribed herein to the terms 'autonomy' and 'heteronomy' is not in accordance with Kant's own terminology or with orthodox commentary. Consider the following statement by Karl Ameriks:

The Kantian self is literally 'auto-nomous,' that is, defined by a *self-legislation* that is carried out on itself as well as by itself ... On the general doctrine of autonomy, he holds that the most distinctive feature of human beings is that they are self-legislating, but in a way that cannot be understood in simply natural terms or given a strict demonstration that establishes its crucial nonnatural component.<sup>11</sup>

As we shall see, the evidence of self-organizing individuals, these 'strangers' smuggled in by the *Critique of Judgment*, poses the problem of a 'special' doctrine of autonomy: autonomy *in nature*. Since our present concern lies with the effects of Kant's formulation on the philosophy of individuation, and with the way the Kantian matrix for the division between self-organizing and hetero-organizing individuation is transformed by authors such as Peirce and Deleuze, we shall not be focusing on the relationship between this 'natural' autonomy and the moral and cognitive autonomy of a self-determining subject. Our investigation of autonomy and heteronomy should thus be understood to qualify and interrogate modalities of individuation, not as directly pertaining to the determinations of a subject. We can simply remark here that there would be much to say about this link, especially in terms of the symbolic function of natural purposes in the *Critique of Judgment*, but even more in

the way that the *Opus Postumum*, with its thematization of self-affection, seeks to find in our experience of ourselves as organisms a basis both for the transcendental unification of experience and for postulating the evidence of self-organization in the first place.

Our aim, however, is not simply a genealogical one. By interrogating the notions of individuation and individuality that subtend Kant's 'solution' to the antinomy in the Critique of Teleological Judgment we hope to provide a deeper account than has been hitherto proposed of the reasons behind the instability that plagues the terms of Kant's problematization of organismic individuality as well as its solution. This will permit us, in Chapter 2, to approach the *Opus Postumum* in light of Kant's own dissatisfaction with the arguments of the third Critique. As we shall show with regard to these later notes and in terms of contemporary debates on self-organization, the problem of the organism, which began with the demand that organization within nature be included within the critical system, leads Kant ever further into an investigation of the (transcendental) ontology of individuation, an investigation, let it be noted, which has considerable repercussions for the original formulation of the problem of organic individuation. As we shall show via Nietzsche's 1868 notes on Kant and teleology, what begins as a recognition of the singularity of the living, an indexical vitalism haunted by the idea of life as an 'empire within an empire', makes way for a generalized inquiry into the problem of ontogenesis as such. The way out of the regulative compromise between mechanism and teleology will thus prove to be in the ontology of the preindividual, in line with the transcendental materialism fugitively indicated by Kant himself in the 'ether proofs' of the *Opus Postumum*. Leaving the discussion of ontogenesis and preindividuality for Part II, let us now turn to the initial position of the problem of individuality as self-organization in the *Critique of Judgment*.

One could speculate at length as to why, in the *Critique of Judgment*, Kant chose to disturb the hegemony of mechanist individuation and causality with the introduction of organized beings. Sensitivity to the contemporary disrepute of the iatromechanics of Descartes's animal-machine in scientific circles, as well as the necessity to curtail Herder's vitalist materialism and its threat to the autonomy of reason, certainly played a part, though it could be argued that ultimately it was the internal demands of the system that led Kant to thematize the organization of the living.<sup>12</sup> Both in its architectonics, with the question of the being of system, and in its destination, with the analogical relationship between natural purposes and moral ends, a philosophy which ties the fate of individuation to the minimal definition afforded by mechanics is

paradoxically in need of the organic as a symbol of the unity both of the critical system and of experience as such. For, as Kant writes in the First Introduction to the *Critique of Judgment*:

As we have shown above, judgment first makes it possible, indeed necessary, for us to think of nature as having not only a mechanical necessity but also a purposiveness; if we did not presuppose this purposiveness, there could not be systematic unity in the thorough classification of particular forms in terms of empirical laws.<sup>13</sup>

Thus we can see that there are two sides to the crisis opened by the irruption of organized beings into Kant's philosophy: (1) the appearance of a new modality of individuation incompatible with the mechanistic principle of individuation of the first Critique, arising out of Kant's confrontation with contemporary debates in the life sciences, both in physiology and in ontogeny or morphogenesis; (2) the determination of the organism as a *symbol* of the supersensible, a problematic object of experience that legitimates the introduction of teleological organization in the architectonic and destination of Kant's system, as well as in the metaphysics of morals that it sustains.

In this chapter we shall focus only on the first of these two aspects, that is, on the introduction of a natural or material modality of individuation, the organization of the living, and its effects on the hegemony of the cognitive principle of individuation whose foundations lie in the alliance between Newtonian mechanics and a philosophy of representation. Three issues are central to the characterization of this modality of individuation. Firstly, the individuation exhibited by organized beings appears to be wholly outside the scope of the transcendental. In a strict sense, *the organism is not possible*, since the only category that allows it to be thought, finality, is not truly a category. As Kant remarks in the *Opus Postumum*, the organism belongs to what can *only* be experienced. Thus, it has the paradoxical status of something that is both *evident* – a modality of individuation that requires to be thought – and *impossible*, inasmuch as, going by Kant's own definition of organized beings in the *Critique of Judgment*, it cannot be an *object of knowledge*, and allows for no direct representation, no subsumption under a concept. Secondly, as Beiser has amply demonstrated, Kant's definition of organized beings was in large part catalyzed by his anti-Spinozism and anti-hylozoism, or to put it succinctly, his anti-materialism. That matter cannot self-organize is for Kant an analytical truth: 'lifelessness, *inertia*, constitutes the essential character of matter'.<sup>14</sup> We shall return to this question of matter in

discussing the innovations brought about by the *Opus Postumum*. For the time being, let us note that the definition of organization is overdetermined by the concern with the nature of representation. The modality of individuation exhibited by organisms is negatively inscribed, both as a symbol and as an enigma, into the systematic inquiry into the constitution of objects for cognition.

In this chapter we shall thus see how and why Kant, having produced a concept of self-organizing individuality (intrinsic physical ends), thus anticipating one of the central theoretical innovations of modern biological theory, is nonetheless effectively forced to suspend his own insight in order to hold true to several amongst transcendental philosophy's articles of faith. These constricting parameters are: the absolute separation of life from matter (Kant's trenchant critique of hylozoism); the heteronomous nature of causation; the *a priori* character of the grounds of scientific knowledge; and the subordination of biological evidence to mechanism as the legislating authority within the realm of appearances. These fundamental tenets of the critical project will prevent it from bringing to fruition one of its most remarkable insights and viewing the individual organism as possessing an immanent principle of organization, explicable neither by mechanics nor by analogy to an intentional form of causation. It will furthermore defer (whether until the *Opus Postumum* itself or not is a matter for debate) the constitution, in the interstice between the two domains of reason, and between determinism and intention, of a distinctly scientific biology, one which, at least as regards the kinship between theories of autopoiesis and the Kantian definition of intrinsic natural ends, is anticipated by Kant himself (see Chapter 2, Section 2.2). Lastly, we shall see how the physico-theological solution to the problem of the organic inhibits the forging of a concept of individuality, as opposed to both objectivity and subjectivity, whilst nevertheless not being able entirely to harness the potentialities of self-organization indicated by Kant's own formulations. Let us then reopen what Kant himself called a 'wild field for controversy'.<sup>15</sup>

## 1.2 Defining nature

We have spoken, rather loosely, of the philosophy of nature. Whilst this term, popularized by Schelling and inseparable from an inquiry into the *productivity* of nature, takes its cue from certain aspects within Kant's work (and finds noteworthy affinities in the *Opus Postumum*), it cannot be superimposed onto the objective determination of nature set out in Kant's major critical writings. This is evident as soon as we consider



Kant's definition of 'nature'. As the determinable object of both ordinary cognition and of scientific research, nature, both in the first Critique and in the *Metaphysical Foundations of Natural Science*, refers to the 'whole of all appearances' defined as 'the sum total of all things insofar as they *can be* the objects of our senses and hence also objects of experiences'.<sup>16</sup> In other words, it is the term designating the correlate of our cognitive apparatus, which unites the forms of intuition, the categories of the understanding and the schematism of the imagination under the aegis of the transcendental 'I'; this nature is the 'material' of possible experience. In this sense, and contrary to the *systematic nature* symbolized by natural purposes, nature *qua* 'whole of all appearances' is a merely distributive term, a 'nonentity' defined by the sheer aggregate of all objects that may be determined through the concepts of the understanding. The substantive itself is deceptive, and in this acceptance the term nature should probably be bracketed. Opposite to this presentation of nature as an indeterminate but determinable field of possible objects of cognition, a nature indifferent to a more robust concept of totality, stands nature as essence and existence. 'Essence is the primal, internal principle that belongs to the possibility of a thing', and 'the word "nature" signifies the primal, internal principle of everything that belongs to the existence of a thing', thus Kant writes in the *Metaphysical Foundations*.<sup>17</sup> This second sense of nature might even be said to resonate with Leibniz's sufficient reason or to Deleuze's internal difference.

To emphasize the intractable gap lying between these two conceptions of nature we could define the first as 'pure exteriority', the second as 'pure interiority'. This distinction will be useful in determining just how to approach natural purposes. Without belabouring the point, we can remark straightaway that the definition of nature in the first sense is functionally equivalent to that of matter.<sup>18</sup> The intimate tie that binds Kant to the Newtonian project lies in this affinity between the material of cognition as explicated in the first Critique and the fundamental laws of mechanics (though we shall see below, reading Kant with Philonenko, how these two aspects must nonetheless remain distinct). Matter is 'the real of sensible intuition', 'the empirical part of sensible and external intuition', inasmuch as experience of it is not commanded by a principle internal to it. Matter is at the 'mercy' of forces acting according to determinable laws, in a domain from which intention is *a priori* absent.<sup>19</sup> This, together with the effort to maintain the autonomy of practical reason, is what lies behind Kant's attack on hylozoism, the doctrine that pretends to ascribe an ontological (as opposed to an analogical) interiority; that is, a 'principle of existence', to matter itself.<sup>20</sup> By deploying the concept

of reflective judgment, the *Critique of Judgment* will try to determine this sort of claim as a subreption and accommodate its necessity, for the sake of research, in terms of analogy.<sup>21</sup> Thus Kant will speak of our experience of the organism as an ‘analogue of life’.<sup>22</sup> The radical implications of this stance, in terms of the aforementioned partition in the definitions of nature, need to be stressed. For Kant, at least prior to the *Opus Postumum*, there is no real distinction between living, on the one hand, and thinking or willing (the union of the understanding with reason’s power of desire), on the other. For the sake of drawing into relief what will appear as the ‘anomaly’ of the organism, it is worth quoting Kant’s own remarks on the gulf separating the exteriority of matter from the interiority of reason and cognition:

Life means the capacity of substance to determine itself to act from an internal principle, of a finite substance to determine itself to change, and of a material substance to determine itself to motion or rest as change of its state. Now, we know of no other internal principle of a substance to change its state but desire and no other internal activity whatever but thought, along with what depends upon such desire, namely, feeling of pleasure or displeasure, and appetite or will. But these determining grounds and actions do not at all belong to the representations of the external senses and hence also not to the determinations of matter as matter. Therefore, all matter as such is lifeless.<sup>23</sup>

This trenchant rejection of hylozoism and of any ‘immanent account of organisms’<sup>24</sup> will overdetermine both Kant’s problematization of the organism-as-individual and the solutions he proposes to deal with the problems that such a chimerical entity poses for objective cognition.

### 1.3 The object of cognition and the evidence of individuality

If the Copernican turn is to produce its own foundation for truth, Kant, as Aristotle before him, needs to raise cognition above the level of mere *aisthesis*. For representations to be accorded truth or falsity, we must leave the surface upon which only object-representations are given as indistinct from ‘their reception in the synthesis of imagination’,<sup>25</sup> and establish a system wherein two terms may be said to enter into a relationship of accordance, in line with the classical formulation of truth: *veritas est adequatio rei et intellectum*. However much the critical

'revolution' transforms the meaning of these terms we still formally remain within the classical dimension, 'since truth consists in the agreement of knowledge with the object'.<sup>26</sup> What is rendered problematic, however, is the very distance between the *res* and the *intellectus*, now recast in the guise of object and concept. As we shall see, this crucial distance is established by the concept of *rule*. In order not to be trapped in a reversible or an-archic flux of apprehensions,<sup>27</sup> some kind of constraint must compel us to the recognition of objectivity. The famous example of the house, which Kant explores in the Second Analogy of Experience, is deficient in this regard, for even though an object is represented there, it remains unclear, under the subjective succession of apprehensions, by what mode of comparison I may judge the validity of the concept (as derived from the representations of apprehension) as 'standing for' the object (as the sum of these representations).<sup>28</sup>

The only way to escape this excessive 'intimacy' of concept and object, which in this specific instance are both products of our perambulatory whim, and thus to ground the emergence of an object out of the series of apprehensions, is to consider the synthesis of the apprehensions under the aegis of necessity. The object will be that which 'necessitates some *one* particular mode of connection of the manifold'.<sup>29</sup> If the object is considered only as a position in space (e.g. the house) we remain entangled in *aisthesis*, and our judgments simply cannot be configured in such a manner as to be the bearers of truth. For the object to be fully determinable as such, and for our synthesis to be endowed with the character of necessity and measured as truth, the object must be conceived first and foremost as a position on the line of time. Kant's object takes on the guise of an *event*. Given the arbitrary character of the succession of my apprehensions, and *a fortiori* of their connection, the object they constitute is doomed to remain ephemeral, merely my own contingent projection. This is not only the case with the object as a position-in-space but can also obtain for it as a position in space-time. If in the latter case the succession were not objectively *required* we would be left with a 'play of representations' unable 'to distinguish one appearance from the other as regards relations of time'.<sup>30</sup>

There is no event, no criterion of truth, and most importantly no object, then, unless the succession is stamped with necessity; that is, unless it occurs '*in conformity with a rule*'.<sup>31</sup> Kant's attack on empiricism stands or falls on the claim that this rule is not the product of a passive subjective synthesis, but on the contrary that it amounts to a condition for experience itself,<sup>32</sup> that no object *appears* unless it is accompanied by the trait of 'compulsion'.<sup>33</sup> The form of objectivity, the object = *x* as a

transcendental condition for the possibility of experience, takes effect in the sphere of knowledge as both a time-position (event) and as a time-relation (the effect of a preceding cause *in conformity with a rule*). The former is of course unintelligible without the latter, since the event is a sheer nonsense for Kant if conceived in terms of a pure upsurge out of 'empty time' (as creation *ex nihilo*).<sup>34</sup> A time-order of appearances is established, bearing the double trait of irreversibility and necessity, in which each object-position can be located in its relation to the others according to a rule, so that 'successive apprehension (synthesis of multiplicities of homogenous units, *quantitative* synthesis) of what first appears to us as a continuous and infinite whole of sensations of varying intensity (*totum realitatis*, intensive magnitude of the sensory given) is so rule-governed (by virtue of *relational* syntheses) that it results in our distinguishing singular objects under concepts'.<sup>35</sup> We encounter here one of the guiding characteristics in Kant's conception of knowledge, *repeatability* (which, as we will see with regard to the organism, translates into its *reproducibility*, as a 'technical analogy').<sup>36</sup> An object is not such, and neither is an event, unless it 'can *always be found* in the connection of perceptions according to a rule'.<sup>37</sup> Leibniz's principle of sufficient reason is taken out of its analytic mould and is transposed upon the line of time<sup>38</sup> as 'a *formal condition* of all perceptions, that the preceding time necessarily determines the succeeding'.<sup>39</sup> In other words, that this time-position (event-object) be determined by a previous time-position within a relational time-order determined by *rules* of succession. Returning to our definition of material nature as 'pure exteriority' we can now see how well the object-as-event (as spatiotemporal position) fits into an account of matter based on Newtonian laws of motion. Furthermore, 'since matter has no absolutely internal determinations and ground of determination',<sup>40</sup> the second law of mechanics will 'apply' the results of the Second Analogy to establish that cause is always external.<sup>41</sup> This last point is essential for understanding the problem posed by the appearance of natural purposes and by the partition between two natures, mechanistic and essential, and their corresponding forms of causality, efficient and final.

Let us now turn to how a nature conceived in accordance with the parameters of Newtonian mechanics is unable to present a satisfactory account of those entities which cannot be effectively deployed and circumscribed as objects: *individuals*.<sup>42</sup> No confusion should obtain between the nature which can be founded *a priori*, in accordance with the structure of our cognition,<sup>43</sup> and the nature that finds the method painstakingly prepared by the *Critique of Pure Reason* and explicated by the

*Metaphysical Foundation* lacking.<sup>44</sup> *There is nothing in the conditions for the possibility of experience* (as laid out in Kant's Aesthetic and Analytic) *that is capable of providing a proper foundation for the appearance of self-organizing individuals*. Considered as objects of our apperception, organized individuals could be grasped *de jure* according to the form of any object in general. Yet mechanism is *de facto* revealed as a method unable to provide us with a satisfactory explanatory schema for getting to grips with their singular constitution and causal structure. Not only is the order of experience (its conformity to causal rule) troubled by the anomaly of the organic, but the formal principle of objective individuation, founded on the correlation of the transcendental subject of originary apperception and the transcendental object = *x*, is deprived of its conditions of realization. Without the mediation of the relation of rule-bound, linear causality, the two purely formal poles conditioning the unity of appearances are bereft of application. They can only provide the transcendental criteria for the individuation of objects under the terms laid down by the Second Analogy.

Therefore, it is by evading the legislation of unilateral and unilinear causation in conformity with a rule that the paradoxical object of self-organization will affect the minimalist, albeit fundamental, principle of individuation at the heart of Kant's philosophy. Though this criterion of the unification of experience in the correlation between a subject and an object by way of the concept is a purely formal principle, a 'correlation of two voids' in the words of Alain Badiou,<sup>45</sup> it nevertheless sees its hegemony suspended as it encounters the exceptional 'fact' of organization, in a manner that blocks any unequivocal response to the question: Is an organism an object? With the suspension of this 'objective' principle of individuation in the 'as if' of reflective judgments about organisms, an even darker prospect opens up for the critical philosophy, a prospect whose implications for ontology and for the very notion of the transcendental we will investigate in the coming chapters: What if, rather than demanding 'another' principle of individuation, another circumscription of possibility, the 'fact' of organization led us to an encounter with an individuation no longer founded on the search for formal principles capable of anticipating its possible manifestations?

This difficulty in integrating the organic within the critical system, or even within the natural science whose parameters are foreshadowed and prepared by the delineation of the transcendental conditions of experience, will preoccupy Kant up to the *Opus Postumum*, revealing, through all of his negotiations with this issue, a certain instability at the heart of the project of transcendental philosophy. To clarify this speculative

nexus – which gathers individuation, the organic and the transcendental under the aegis of an investigation of ‘nature’ – we propose a heuristic distinction between ‘evidence’ and the ‘given’. ‘Given’ designates the sum total of all appearances that may be objects of determination by the concepts of the understanding. This conceptualization, as we noted, is inextricably linked to an understanding of objects as time-positions, which, once nature is specified as matter, are placed in a system of external causation along the line of time.<sup>46</sup> According to the *Critique of Pure Reason*, and the application of its categories to physics in the *Metaphysical Foundations*, no objects are given unless they are submitted to this ‘rule of all rules’, that of linear and heteronomous causality. Here we may want to aid ourselves by drawing a distinction between the ‘mechanicism’ of the first Critique, as set out in its account of causality and objectivity in conformity with a rule, and mechanics as natural science. While the first is the formal condition for the possibility of experience (not just of scientific research, which it leaves *almost* entirely underdetermined), the latter, as a scientific doctrine, is made impotent in the face of organized individuals.

Individuals, considered here under the heading of ‘evidence’, thereby constitute what can be given in experience alone. In this regard they do not belong to ‘the possible’ but merely to the ‘non-contradictory’ (or, to logical as opposed to transcendental possibility). As Vittorio Mathieu remarks, a natural purpose ‘is not something of which we may construct a priori the *real possibility*; we assume it only because experience offers us examples of objects of this kind.’<sup>47</sup> Kant’s own remark is even stronger: ‘the possibility [of an organic body], if experience did not present us with examples, should be opposed by anyone, like the fantasy of the prince of Patagonia’.<sup>48</sup> The organism (or natural purpose) is not a direct given *because* it is not an *a priori* possibility – which is why the operation of reflective judgment is called for. The paradox, of course, is that one is *forced* to think the organism, insofar as its evidence is such as to show up the lack and limitation of an *a priori* legislation. The latter is not simply incapable of anticipating the form of the organism (which is no reason for alarm, considering our cognitive finitude) but cannot even formulate its *possibility*.

Our distinction between ‘given’ and ‘evidence’ can thus be seen to map quite precisely onto the one introduced by Kant in the *Opus Postumum* between ‘1 – that which is, in a general fashion, an object of experience; 2 – that whose actual possibility is not conceivable if not by experience alone’. The organism (natural purpose, self-organizing being) is thus not a given, nor is it an object-event or a time-position, but

rather constitutes an individual the evidence of which demands 'indirect' explanation.<sup>49</sup> Straddling the abyss between the two natures, as an *appearance* that can only be thought of in terms of an *internal principle* (an organic principle or principle of existence, to follow Mathieu and Debru respectively), the organism obliges us to confront the strange transactions between exteriority and interiority – that is, between Kant's two natures – and to do so from the standpoint of the modalities of individuation they involve. We will deal with this question in three steps, focusing on the following themes: (1) the structure and causality of natural purposes as intrinsic physical ends (individuals or organisms); (2) the problem of intentionality and analogy; (3) the solution of the antinomy of judgment and the physico-theological defence of theism.

#### 1.4 Causality and mereology in natural purposes

Though one may dispute whether Kant's real concern lies with '*system structure* and in particular with *self-organized system structure*',<sup>50</sup> it is fair to say that the unique insight into the evidence of organized individuals – based on the intertwined claims that they can *only* be experienced *and* that reflective judgment alone is capable of isolating them *as* organized individuals – is the most historically pregnant and philosophically problematic aspect of the Critique of Teleological Judgment. Prior even to our identification of the kind of causality they instantiate, the problem revealed herein is that of the irruption of an individual – such as the tree of Kant's own example – irreducible to the mechanist framework of rule-bound cognition and the spatiotemporal individuation of objects. Many commentators concur in acknowledging the philosophical gravity of recognizing such a 'fact', as does Kant himself in the *Opus Postumum* and passages scattered through the third Critique. This is especially the case when he famously declares that 'the organization of nature has nothing analogous to any causality known to us'<sup>51</sup> and that on this basis no knowledge of 'organized beings' can be gained. Of course, though they 'must be thought as possible only as purposes of nature',<sup>52</sup> it is never explained how we are supposed to experience or cognize them in the first place. Others have seized upon this profound anomaly, whereby, as Bennington notes, 'we never *see* natural purposes as such, but only certain objects which we cannot even conceive without judging according to the thought of a purposive causality.'<sup>53</sup>

The determination of the organism as a 'paradoxical object'<sup>54</sup> lies precisely here, in the fact that it cannot be qualified simply as possible; that is, as subsumable under the general form of objectivity. The organism

remains something uncertain, not properly determinable, *precisely because it is only given in the mode of evidence*, or as Kant puts it, is 'empirically conditioned'. Yet in this case evidence means that this 'object' is only *indirectly* given, that it is only possible by means of a concept of reflection, which functions as its 'rational principle'. As Kant writes, '*we have no way of seeing and establishing dogmatically that it has objective reality (i.e. that an object conforming to it [the rational principle] is possible)*'.<sup>55</sup> We have already seen, with regard to causality, the imposition of objectivity as rule in the realm of the given. The guiding concept of the object at that juncture was as a position on the line of time. Contrariwise, the individual, as an objectivity which is not 'given' in the terms of the Second Analogy, resists being submitted to the object = *x qua principium individuationis*. It asserts its own limit, which is to say its autonomy. Mathieu is thus led to speak of observer-independent unity of the organism. Though this remark might be considered illegitimate within the stringent confines of the critical project, we should consider it in light of the procedures or modalities of individuation that the entire discussion of natural purposes and teleology necessarily involves.

On the transcendental and mechanist level, the form of objectivity, under the constraint of rules within a time-order, legislates over the selection of the objects of experience. The limit that circumscribes the object is a formal one, which is why matter can be construed as infinitely divisible. The limit of the individual itself, on the other hand, is its own production, it is part of its self-organization and determines it as a unilateral distinction. We can clearly see here how Kant, like Leibniz, belongs to a tradition inaugurated by Aristotle, which proposes to think the order of nature in terms of the difference between 'given, natural and real totalities, on the one hand, and inferred, nominal and artificial ones, on the other'.<sup>56</sup> According to Kant we can only conceive the organism as a natural totality in accordance with the characterization of life in the *Metaphysical Foundations*; that is, in terms of a 'phenomenalization of a unity-in-itself'.<sup>57</sup> The source of the unstable and paradoxical character of the 'organized object' thus derives from the projection of the matter/life antithesis onto the mereological determination of the hypothetical causality belonging to self-organization – from the whole to the parts and back again. This is especially evident in the Antinomy of Teleological Judgment, which we shall consider below in Section 1.6.

Let us now turn to the definition of natural purposes. At base, it consists of two moments, static and genetic: natural purposes are structurally organized entities and causally self-organizing beings. The first point is simple enough: 'the possibility of [a natural purpose's] parts



(as concerns both their existence and their form) must depend on their relation to the whole'.<sup>58</sup> Obviously, mechanism cannot account for this, insofar as its 'positions' can only constitute causal chains and no real 'unities' beyond themselves.<sup>59</sup> Art would seem to provide an analogy, if not an explanation, were it not for the second, complementary part of the definition: the whole is not the cause of the combination of the parts, it is only the necessary correlate in judgment of the reciprocal production of parts as regards their form.<sup>60</sup>

What necessitates the passage from the first to the second point in the definition is the refusal of external causality with respect to natural purposes. These cannot be thought of as works of art because they would 'then [be] the product of a rational cause distinct from the matter of the thing', as happens with machines, for example.<sup>61</sup> As unilateral distinctions generating their own limits and forcing them upon 'our' cognition, natural purposes resist being cognized according to external causes. Their self-organization implies a 'relational unity of parts' (the mereological condition subtending our first definition), an 'integrated reciprocal causality' (or self-regulation) and, what is of most interest, their 'autoproduction'.<sup>62</sup> The second part of the definition, which seems to bear the promise of the foundation required by such an inner causality (especially *vis-à-vis* the notions of 'formative force' and 'reciprocity') in fact contains the seeds of the solution that will effectively undermine the claims of self-organization, ultimately leading to the theistic neutralization of the anomaly of the organic. Refusing an ontological path leads Kant into the 'for us' of analogy, where the evidence of nature is supplanted by a *principle of repetition*. This principle is laid out in the following passage, which follows directly upon the second moment of the definition of natural purposes:

Therefore in order for us to judge a body as being, in itself and in its inner possibility, a natural purpose, what is needed is that all its parts, through their own causality, produce one another as regards both their form and combination, and that in this way they produce a whole whose concept (*[if present] in a being possessing the causality in terms of concepts that would be adequate for such a product*) [my emphasis] could, conversely, be the cause of this body according to a principle, so that the connection of *efficient causes* could at the same time be judged to be a *causation through final causes*.<sup>63</sup>

The analogical form of this reflective judgment demands that we 'repeat' the production of the whole according to the only form of

causality that we know apart from the efficient: ideal or final causality, in its techno-logical acceptation. The reflective application of this causality according to concepts will result in the impossibility of truly thinking a body 'in itself and in its inner possibility'. The reason for this is simple: since bodies themselves cannot be ascribed the understanding needed for causality according to concepts (the power of desire) they cannot be self-organizing in the complete sense – that is to say, ends-of-themselves – hence they must be understood as effects of a supersensible nature (regulatively, of course). If bodies cannot be regarded as aggregates caused by the known mechanical laws of nature, then they must, as *self-organizing* wholes, be subject to the heteronomous causality of an *idea*. Their individuality thus finds its purely speculative ground in a supplementary, eidetic dimension<sup>64</sup> that can only be thought of theistically, in terms of the hypothetical demiurgic activities of an entity in possession of intellectual intuition. I thus concur with Roqué in deeming Kant's conception of causality *in nature* to be exclusively external.<sup>65</sup> This holds for both of its forms: as efficient, in the form of pure exteriority outlined above, and as final, in terms of the production of causes according to concepts belonging to an understanding heterogeneous to its material effects.

The determination of time-order as necessary and irreversible, and of time-positions as localizable according to a causal sequence in conformity with a rule, supply Kant with the elements needed to forge a critical notion of efficient causality. Also termed 'real cause', it legislates over the domain of matter; that is, of exteriority. The domain of life is marked instead by a form of causality, 'ideal' causality, which, though it may be determinable as concept within the metaphysics of morals, is presented in the critique as a 'technical' or 'artistic' (we might even say a 'poietic') concept. As we remarked above, *both* real and ideal causes amount to 'external' forms of causation. What's more, according to Kant they represent the *only* forms of causation. Initially, Kant seems to adopt the position that organisms may be explained by a judicious conjunction of these two forms of causation – either to alternate with or complement one another. Thus, we could follow efficient causality in the production of the whole and adopt final cause to explain the convergence of parts towards totality. However, if we take Kant at his word when he remarks that '*the organization of nature has nothing analogous to any causality known to us*', we can sense that he himself does not regard such a solution as satisfactory. From the first element in the definition of natural purposes we learned that in organic individuals the whole is inextricable from its parts. Yet what the idea of a complementarity between efficient and ideal causes suggests is precisely the consideration of the parts of the

organism, on the one hand, and the whole organism, on the other, at *separate* points in the investigation and according to divergent methods. What is more, at the level of the parts themselves reciprocal production is an opaque concept if we hold to either of the two postulated forms of causation, mechanical or eidetic.<sup>66</sup> This aporia concerning causality troubles the great partition of matter and life, and no more so than in statements such as ‘nature organizes itself’.<sup>67</sup> In the investigation of the organism the boundaries between the two definitions of nature are blurred. There is a name for this indiscernibility of life and matter, and it is the name of Kant’s biophilosophical nemesis, hylozoism.

The first defence against the threat of hylozoism is really no more than an affirmation of theoretical impotence, such as when Kant calls self-organization an ‘inscrutable property’.<sup>68</sup> This is not surprising if we remain close to the basic parameters of the critical project. If life, as Debru remarks,<sup>69</sup> is for Kant essentially the activity of acting through concepts, and is thus properly speaking ‘immaterial’, it surely cannot organize itself, it can only organize matter. *Life cannot organize life*, except by acting upon matter; in turn, matter by definition cannot organize, it can only ‘affect itself’ in causal chains. The second defence is to relegate the organism to the level of reflective judgment. Though it is clear how this may aid us in symbolizing the supersensible ‘for the sake of assisting [the] practical power in us’ it is not as clear how the ‘remote analogy’ with our own final causality can actually further ‘the investigation of organized objects’.<sup>70</sup> In the effort to fight the confusion of life and matter effected by hylozoism, Kant renders the very possibility of thinking physico-biological individuality deeply enigmatic. This is already the case once we speak of organisms as purposes of nature, at which moment we are no longer able to think self-organization, for ‘nature’ has now become the seat of an agency that *transcends* the actually existing organisms. The initial demand that had instigated the investigation of the organism – that this ‘evidence’ must be accounted for by another method than that of mechanism, ‘*such that we can see it as law-governed*’<sup>71</sup> – is eventually answered by an inadequate solution, a disavowal of the possibility of any foundation (be it even ‘indirect’), and the tentative postulation of an ‘inscrutable property’. This clearly indicates that Kant himself, as the *Opus Postumum* amply demonstrates,<sup>72</sup> did not see this problem as ‘resolved’. Finally, the third defence against hylozoism is provided in the antinomy, issuing (much too swiftly) in the supersensible and in the reasoned preference for theism, thus allowing the heteronomy of ideas to be imposed, once again, upon the material evidence of individuality.

## 1.5 The Antinomy of Teleological Judgment and its ontological conversion

Kant begins the treatment of this antinomy by presenting nature in accordance with the first definition we discussed in Section 1.2. This is the realm of determinant judgment and *a priori* laws, whose foundational might, as Kant readily admits, is matched only by their poverty in what concerns actual research. Kant then turns to the real terrain of science, to those laws that are only given in and by experience, laws falling under the restricted jurisdiction of reflective judgment. These two levels, instantiating two different kinds of judgment, seem to parallel the distinction which Kant elsewhere makes between a *general physics*, which articulates the transcendental principles of mechanicism, and a *special physics*, understood as the experimental doctrine of evidences. But such a neat distinction is not available to Kant when it comes to natural purposes. For though mechanicism is, in a sense, coextensive with the realm of possibility,<sup>73</sup> and in that sense determinant, the antinomy of teleological judgment is erected from the standpoint of reflective judgment. Having encountered a particular instance in the world of sense, this judgment consists in finding a suitable principle for its 'production'. Once the point of departure is the particular instance or case, mechanicism, though enduring as an *a priori* maxim, is no longer determinant; that is, the particular at hand can in no way be derived or deduced from the *a priori* foundations of natural science. Though Kant effectively retracts this point a few pages in,<sup>74</sup> at the start of the antinomy it appears to be quite definitely established. The antinomy emerges as we pass from the maxims of reflection to constitutive statements. Here lies the essential subreption that consists in going from epistemological necessity to ontological claim, from the 'must be judged' (maxims) to the 'is' (principles). Whilst the conflict of maxims can still be resolved by referring us to the limitation of our knowledge, its ontological conversion cannot. The rule for the possibility of experience explicated in the Second Analogy constitutes the very opening of the 'whole of appearance', yet its ontological counterpart as a 'determinant *a priori* principle' is illegitimate. *Mechanicism cannot be ontologized*. Here lies the essential distinction between being constitutive for the possibility of experience and being the rule of production, as it were, for empirical actuality itself. The *a priori* nature of 'epistemological' mechanicism does require that we take it as far as its explanatory power permits, yet Kant ultimately seems to concede that the very investigation of nature depends on a regulative approach, even when it comes to the mechanist sphere.

Alexis Philonenko starts his elegant treatment of this crucial node in the Critical philosophy by directing our attention to two traits of the antinomy. Firstly, its abnormality: the Antinomy of Teleological Judgment is unique to the extent that it is the only one to possess a pure contradictory structure (issuing, at first glance, in an either/or). Once the 'ontological conversion' takes place (i.e. once we consider the two rivals in the antinomy as constituting actual rules for the production of natural phenomena) we are confronted with two *irreducible* analytical statements bearing on the same object: nature as the aggregate totality of appearances. As he writes, 'This antinomy presents itself in fact as an *analytical* (contradictory) *opposition* which it is impossible to resolve into a *synthetic transcendental proposition* formed by opposites and sub-opposites.'<sup>75</sup> By the latter, Philonenko intends the procedure whereby the thesis and antithesis are shown to bear on different aspects of their object or on different objects altogether. Moreover, the Antinomy's necessity is not exhaustively proven, at least with respect to the antithesis. The antithesis itself appears as a mere non-contradiction, not as endowed with any kind of *a priori* grounding. The only viable explanation for its having gained the right to producing an Antinomy is that in this instance the force of evidence has compelled the transcendental method to acknowledge a form of objectivity (organization) which is in no way reducible to the *a priori*. Rather than simply accepting Kant's remarks upon the illegitimacy of the Antinomy when conceived ontologically, Philonenko will attempt to investigate it on its own terms. This seems justified, inasmuch as the return from principles to maxims only serves to displace the opposition from the real to the spirit.<sup>76</sup> The second peculiar trait of the Antinomy emphasized by Philonenko is its apparent 'lopsidedness'. As Kant indicates in §71, the Antinomy seems to pin a determinant judgment against a reflective one, or, to use the terminology proposed above, the (*a priori*) realm of the given against the contingent and indirect character of evidences.<sup>77</sup> This problem is resolved in two apparently incompatible ways by Kant himself: first, both are established as maxims and their complementary usage is recommended;<sup>78</sup> then, determinant (constitutive) and reflective judgment (as responsive to a contingent demand) are opposed, and their realms of applicability clearly demarcated.<sup>79</sup>

Philonenko's interpretation rightly sees both solutions, the standpoint of reflection and the ascription of areas or domains of legitimacy, as deficient. Instead, he chooses to take the ontological conversion on board and construe the Antinomy as a device that effectively engenders a new orientation, or rather indicates a deeper necessity within the

architectonic of the critical system. We are thus led back to our main preoccupation, the paradoxical nature of the evidence of individuality. The point on which Philonenko's argument turns is the doubling of mechanismism into a 'determining principle of the possibility of sense objects', on the one hand, and a maxim of reflection, on the other. If this doubling is not successful, an eventuality Philonenko tests before arriving at his own conclusions, the antinomy will collapse under the hegemony of mechanismism. This is true even without the ontological conversion, merely through the constitutive role of mechanismism for any possible experience. Again, it is the sheer *evidence* of the purposiveness of self-organized individuals that blocks such a solution. The domain of mechanismism *must* be curtailed: 'such is the originality of the antithesis: unsustainable *de jure*, it is necessary *de facto*.'<sup>80</sup> Not only that, but, as we noted above, the mechanismism upheld by the Second Analogy, though indispensable for the establishment of scientific laws, is altogether incapable of providing these very laws with their empirical specificity. As Philonenko indicates, it cannot even be prevented from giving rise to a world both 'real *and* absurd': 'From the universal analogy of a possible experience to the particular analogy there is an *abyss* which one would not know how to bridge.'<sup>81</sup>

Thus, reflective judgment is so essential for the purposes of research into the structure and causality of the world of appearances precisely because we can neither simply derive *a priori* the laws that produce our instances or evidences, nor can we merely grasp these laws in the empirical realm.<sup>82</sup> According to Philonenko, the recognition of this *entre-deux*, neither transcendental foundation nor empirical induction, is the primary achievement of holding fast to the analytical antithesis produced by the ontological conversion of the antinomy of teleological judgment. If we do this we see that the thesis produces a Cartesian solution, 'the real is analytically contained within the possible', whilst the antithesis – which amounts to an 'absolute realism' – negates the very possibility of a transcendental philosophy. Philonenko is thus led to determine reflection itself as a dialectic between these two poles, or, as he puts it, '*une antithétique*'.<sup>83</sup> The very possibility of science would be null and void if either of these positions were given full legislative powers. We would be faced with an alternative between the tyranny of determinism, on the one hand, and an anarchy of temporal reversibility and anomic individuation, on the other. We thus see that Philonenko's initial choice, to linger with the ontological conversion, was indeed intended to exacerbate the problem of the organic and to return to reflective judgment in order to define it as being in its essence a dialectic, one presupposing a

polarity of two terms – possible and real, the form of the given and the demand of evidence. Though the solution itself is disputable, and redolent of Hegel's own momentous appropriation of Kantian teleology, Philonenko's insistence on the emergence of a properly Kantian dialectic of reflection from the antinomy of judgment bears upon two critical points that are quite significant to our own aims.

First, in proposing the dialectic as a third form of production, Philonenko picks up on Kant's own admission that both ideal and real cause are unable to account for the phenomenon of the self-organization of nature. Second, Philonenko draws a crucial link connecting the difference in kind between the two maxims, which never act in unison, and the 'derealization [of a dialectic of reflection which follows from] positing the identity of [the two] principles in the supersensible'.<sup>84</sup> It is this 'derealizing' resolution of the antithesis in the supersensible that leads us to our final remarks, bearing on the postulate of an external, immaterial principle of organization; that is, on theism as an inadequate resolution of the conundrum posed by the 'paradoxical object'.

## 1.6 Analogy, contingency and the technic of nature

Granting the evidence of natural purposes, critical philosophy is faced with an array of philosophical solutions to the problem of accounting with the organism, 'this stranger in natural science'.<sup>85</sup> Unsurprisingly, Kant presents all these responses as dogmatic – that is, *ontological*:

the dispute [between the various systems] is about objective principles concerning the possibility of things ... and by no means is the dispute about the subjective maxim as to what mere judgment we should make concerning the cause of such purposive products.<sup>86</sup>

These conflicts over nature's capacity to create such purposive entities, over its 'technic', lead Kant to distinguish two types of hypotheses for production, each in turn being divided into two subtypes: intentional technic (*technica intentionalis*), which divides into hylozoism and theism; unintentional technic (*technica naturalis*), apportioned between casualism (Epicurean or Atomistic) and fatalism (Spinozist).<sup>87</sup> The key trait of *technica naturalis* is that it does *not* draw a distinction within nature between types of causality. Momentarily suspending the question of the ontological conversion, Kant wishes to dismiss this stance in terms of its explanatory weakness in the face of the evidence of organization. Adopting pure contingency as the 'law' of passage from motion

to individual form, the casualists are reprimanded for completely ignoring the demand of explanation, and summarily dismissed. The attack on Spinoza is both more elaborate and more revealing of Kant's own stance. Spinoza is said to fail in providing an account for the *unity of purpose*. Leaving aside the fact that Spinoza's thesis is that we can indeed account for individuation without any teleology whatsoever, the real point of Kant's attack lies in the reiteration of the inextricable link between purpose and the power of desire:

For the unity of a purpose is a very special kind of unity. It does not follow at all from a connection of things (beings of the world) in one subject (the original being), but always carries with it reference to a cause that has understanding.<sup>88</sup>

So construed, organized beings *cannot but* be explained by way of analogy. Mechanicism *must* be complemented by an anthropomorphism, in accordance with the fundamental partition of life and matter,<sup>89</sup> 'so that we are left with no other way of judging nature's production of things as natural purposes than in terms of a supreme understanding as cause of the world'.<sup>90</sup>

More specifically, the reason for the introduction of this supreme understanding and the refusal of the causal monism espoused in Spinoza is based on the necessity of maintaining the finitude of human cognition and a separation between the domain of mechanistic explanation and the supersensible realm of 'real' causes. In this regard, organized beings serve a twofold intrasystemic function. On the one hand, as exceptions to the subsumptive powers of unidirectional causal explanation, they represent within nature *the fact of finitude*, in the guise of the paradoxical experience of a natural reality that exceeds our comprehension. On the other, they are the *signs* of a purposiveness without which we would not be able to reflect upon the accord of our faculties with nature, the specification of empirical laws within a horizon of systematization, or the harmonization of our morally autonomous actions with the natural, that is, mechanistic, train of events. Finitude and supersensible destination are thus united in the notion of organized beings as *contingent* natural data, with this contingency functioning as the double-edged sign of our finitude and of a supersensible systemic horizon.<sup>91</sup> This contingency is of course derived from the paradoxical status of self-organization in the midst of the mechanical laws. Or rather, the paradox which we isolated in the 'im-possibility' of the organism is here turned into a veritable contradiction between the two



terms of the concept: as 'natural', the organism must be subsumed under the mechanical necessity of the laws of nature, but as 'purpose' it must be considered as a contingent product with regard to the same laws. As Bennington writes, commenting upon §74 of the *Critique of Judgment*: 'What is contingent to the eyes of mechanical causality, as revealed by the form of organized beings, then, refers us not only to a different maxim to guide our research, but beyond nature as such, or at least to a thought of a totality of nature as such, as grounded in something non-natural and unknowable.'<sup>92</sup>

Turning now to the realism of purposes proposed in *technica intentionalis*, we encounter Kant's crucial critique of hylozoism (or *physical realism*). The virulence of this attack, which is not limited to the *Critique of Judgment* alone, and in which we find the consequences of Kant's dispute with Herder, is based on two factors: firstly, hylozoism is the only other account, together with the theism (*hyperphysical realism*) that he reservedly espouses, of an intentional technic; secondly, and perhaps more significantly, it disregards Kant's fundamental position concerning the distinction of life and matter, of the autonomy of desire and the heteronomy of material causation. In Kant's view, hylozoism, as all other ontological determinations of the problem of natural organization, tries and fails to accommodate both the necessity that accompanies material phenomena and the contingency (and evidence) of an intentional technic.<sup>93</sup> Theism, on the contrary, can be appropriated by transcendental philosophy, since it is compatible with the necessity of reflective judgment as an analogue of the power (faculty) of desire, provided, of course, it is critically curtailed: theism 'is absolutely incapable of justifying any objective assertion'.<sup>94</sup>

The *other* causality we had glimpsed in Kant's formulations of self-organization, in the irruption of a paradoxical autonomy of matter, is apparently put to rest, and the unidirectional causality of mechanistic causation is now merely doubled by the non-explanatory postulate of a unidirectional causality of intelligence. As Guyer writes: 'Kant proposes that we can reconcile the reciprocal causation that we observe in organisms with the only form of causation we actually understand, progressive or unidirectional causation, by thinking of organisms as if their complex organization is the product of an antecedent design for them which is part of an intelligible unidirectional causal sequence.'<sup>95</sup> It is not surprising then that Kant would confess a certain perplexity and dissatisfaction at the results of resorting to the 'immaterial principle': 'Once I have determinately stated that certain things are products of divine art, how can I still include them among products of nature, when it was

precisely because nature cannot produce such things in terms of its [own] laws that I had to appeal to a cause distinct from it?<sup>96</sup> As we will see in the next chapter, Kant did not rest content with the resolution of the Antinomy of Teleological Judgment, neither in terms of its capacity to establish regulative guidance for empirical research, nor as an intrasystemic contribution to the unity of experience and the systematicity of cognition. Other ontological conversions will prove necessary in order to unravel the problem of individuation first set out in the encounter with the strange evidence, the anomaly, of self-organization.

# 2

## The Fate of Self-Organization: From Natural Machines to the Philosophy of the Organism

### 2.1 *Materia soluta, materia ligata*: individuation in Kant's *Opus Postumum*

In the last chapter, we investigated the irruption of self-organization into Kant's critical system, its incompatibility with the mechanistic and rule-bound spatiotemporal individuation proposed in the first Critique, and the unstable resolution of its problematic status in the Antinomy of Judgment. As we saw, the demand posed by the ontological evidence of organization to transcendental philosophy was only suspended and diverted by the introduction of reflective judgment, the employment of analogy for scientific investigation and, last but not least, the symbolic usage of the organism, for the sake of the systemic unity of critique and its theistic destination. In this chapter we will consider: (1) how Kant himself transformed his conceptualization of individuality in nature, extracting it from a strictly teleological inquiry and bringing it into the purview of a general theory of matter, covering the structure of natural machines as well as individuation of matter into bodies; (2) the legacy of Kant's arguments for the distinction between organic and mechanical modalities of individuation on twentieth-century debates, in particular on theories of autopoiesis and on Whitehead's philosophy of the organism. I shall conclude the chapter with a brief reflection on the effects of such transformations in our understanding of individual or individuating organization on the very idea of a transcendental philosophy.

Far from merely clarifying the details of an anachronistic engagement with the natural sciences on Kant's part, an examination of Kant's struggle

with the concept of organized beings in his late notebooks on the 'Transition from the Metaphysical Foundations of Natural Science to Physics', the notes later collected as the *Opus Postumum*, highlights the obstinate presence of the problem of material individuation in his thought. Kant's continuing struggles and reformulations refute the *prima facie* legitimacy of the position according to which he 'thinks that questions of individuation for empirical objects have no deeper answer than one proceeding in terms of the organizing principles of perceptual experience'.<sup>1</sup> As we shall see, though the anomaly of organic form might have posed the initial impetus for the unfinished project of the 'Transition', it is ultimately in its approach to matter that these late writings provide a novel avenue into Kant's treatment of individuation. It is not my intention here dramatically to unveil some repressed conceptual content gnawing away at the foundations of an otherwise impregnable Kantian edifice. Indeed, if there is something to be learned from Kant, it is precisely the rigour with which the resistance of certain conceptual instances to systemic assimilation is exhibited, and the manner in which these apparent impasses are mined for the sake of the system. By giving us a glimpse into Kant's conceptual laboratory, the *Opus Postumum* has the great advantage of emancipating us from any fetishistic attachment to constituted systematicity and turning our attention to the remarkable inventiveness at the heart of Kant's systematizing will.

By focusing our attention on this will to systematicity we can see how the intrasystemic or symbolic use of organic form is constantly accompanied by its shadow, the ontological conversion discussed by Philonenko. As we saw, natural purposes present, by way of the experience of a being which is not possible as such, a sort of revenge of the *a posteriori*, of the evidence of ontogenesis, upon the limitations of a transcendental account of objective individuality, an account which thus stands revealed as overdetermined by the mechanistic image of spatio-temporal localization. In line with the focus in the previous chapter on the organism as crisis and conversion of the transcendental approach to individuation, my interest here is not in the strategies whereby the Critical philosophy strives for the regulative horizon of systematicity, but rather with the relation between the definition of organized beings and the transformations in Kant's concepts of matter and mechanism, as well as, more generally, with the philosophy of individuation that subtends this last stage of his thought.

Rather than considering it in terms of its contributions to the unity of the Critical philosophy we will thus approach the *Opus Postumum* from the angle of a general theory of material individuation, envisaged

by Kant as a necessary component in the transition to physics. In these notes, in contradistinction to the *Critique of Judgment*, the anomaly of natural purposes is not channelled as a symbol of the unity and moral destination of reason; instead, organic beings are interrogated with the aim of actually including them, albeit without entirely exorcizing their problematic status, in the *a priori* systematization of the moving forces of matter, the preamble to the endlessly deferred passage to physics.<sup>2</sup> The other attraction of the *Opus Postumum* is that it makes manifest how a determination of the status of individuality – whether it be that of the ether, of a physical body (organic or inorganic) or of the subject of autoaffection – is a prerequisite for the inclusion of any of these terms within the system's architectonic. Accordingly, the very existence of the system of matter, as well as of the conceptual apparatus meant to anticipate and delimit it, depends on the delineation of these 'material' or ontological modalities of individuation. Thus, rather than on causality or purpose, we will continue to fix our attention on the questions of organization and individuality. Of course, it could be legitimately argued that neither the problem nor the concept of individuation can be seen to operate unequivocally within Kant's critical philosophy.<sup>3</sup> Whilst not wishing to dispute the *prima facie* validity of that view, I hope to have already shown that much light is shed upon Kant's thought and its relationship to the natural sciences by reframing it through the theme of individuation. Moreover, if we consider the profound and lasting effects of Kant's formulation of the problem posed by the organization of the living to philosophical thought, together with the continuing attempts to provide an ontological conversion, or even a naturalization, of Kant's concept of natural purposes, it is clear that we are dealing with an issue whose repercussions for the philosophy of individuation are worthy of note and whose elucidation from an ontological standpoint holds considerable promise.

Outside of the anomaly of the organic, the minimal model of individuation forwarded by Kant is of course a strictly representational one. Prior to any fine-grained determination of entities via the grid of intelligibility provided by the categories, the fundamental act of individuation, which is the act that grounds any determinant judgment whatsoever, must isolate an object-as-representation out of the potentially anarchic flux of appearances (see Chapter 1, Sections 1.3 and 1.5). It is only in establishing a lawful order of connections in space and time, through the effect of a causal sequence functioning in conformity with a rule, that we are able to 'distinguish one appearance from the other as regards relations of time'.<sup>4</sup> A metric, unilinear time commanded by

lawful causal sequences is thereby a condition for the separation of one appearance from another and *a fortiori* for any inferences regarding the substantial and enduring individualities that may lie behind such appearances. If there is a principle of individuation in Kant, it is found here. The transcendental mechanics in which this principle is embedded is thus foundational of the realm of possible experience and constitutes, in its correlation to the logical and transcendental unity of the subject of representation, the sole non-problematic modality of individuation available to transcendental philosophy.

As the ambivalent resolution of the antinomy of judgment suggested, the primacy of this mechanical principle of individuation means that in our investigation of organized beings we are ultimately bound to alternate between two forms of causality: the constitutive one, an efficient causality working *partes extra partes*; and the merely problematic one, a final causality in which the whole can be said to overdetermine the reciprocal production of its parts by analogy with a purely intentional causality according to concepts. It is this analogy with an intellectual intuition that finds its mortal simulacrum in our formative technical endeavours. It is also what lies behind Kant's anti-Spinozist endorsement of theism and his affinity with those vitalist approaches to organization that argue for the necessity of postulating an *immaterial principle* behind phenomena of material self-organization.

Nevertheless, Kant is adamant in affirming the non-explanatory nature of such analogies, whose function, in the last instance, is bound up with the subjective experience of reflection upon entities whose individuality cannot be accounted for mechanistically, entities which do not conform to the status of objects but are rather, as Kant writes in the First Introduction to the *Critique of Judgment*, 'individual things that have the form of systems'.<sup>5</sup> The problematic concept of organized beings, as Kant himself acknowledges, is grasped *neither* by analogy to a theo-technical causality according to concepts *nor* by reduction to mechanistic causality. Yet if the organism is not thought according to its process of individuation but (problematically, of course) as a formation defined by the efficacy of an eidetic plan of organization (a final cause ordering functions and development), individuation, here so intimately bound with a particular configuration of subjectivity (as volition) and with a particular form (self-organizing totality), cannot itself be investigated. This converges with Beiser's contention that the aim of the third Critique is not, as has been so often stated, a bridging of the noumenal/phenomenal divide, but a trenchant defence of the noumenal itself from encroachment by the ultimate indiscernibility between (or immanence of) life, matter

and subjectivity. Vittorio Mathieu's verdict on this point also appears substantially justified: 'the foundation of finality, capable of reaching the negative aim of resolving a difficulty within the Kantian system, does not seem equally satisfactory in its positive aspect, that is to say in grounding natural organicity'.<sup>6</sup>

Mathieu's own thesis regarding both this shortcoming and the further developments of the *Opus Postumum* is stark: the transcendental philosophy is, by its very grounding parameters, incapable (not to mention unwilling) of providing such a foundation. Given Kant's pivotal distinction between the domain of possible cognitions (the 'given') and what can *only* be experienced ('evidence' or mere non-contradiction),<sup>7</sup> it is clear that entities belonging to the latter category, that of a contingent nature which is internally and mereologically differentiated, and only cognisable *a posteriori*, cannot be the objects of unequivocal transcendental grounding. Yet Mathieu's reading of the *Opus Postumum* as a necessary transgression of the boundaries of critique<sup>8</sup> leads him to view the organism as the instance of a passage from the mere 'as if' of reflection and its principle of repetition or reproduction to a third type of possibility, neither simply *a priori* nor *a posteriori*, but covering 'that which we must think in favour of experience'.<sup>9</sup> The notion of 'the indirect' is enlisted here to suture the gap between givenness and evidence; Mathieu will thus speak of a 'non-empirical plane of the indirect phenomenon', and of a 'thinkable which becomes given indirectly'.<sup>10</sup> Empirical evidence (merely logical possibility) will thereby be reconfigured as an 'indirect fact', 'a thought with which experience is made'; this third form of possibility ('real possibility') is the 'constitutive invention'<sup>11</sup> which responds to the demands of the phenomenon of life without thereby effectuating a straightforward subreption of critical philosophy, but also without the unsatisfactory trope of analogy or repetition and its failure to truly engage the evidence of individuality.

For, as Mathieu argues, the organism cannot be the object of an analogy that would eidetically repeat its production. The concept of self-organization is rendered unintelligible once the organizing and the organized, the individuating and the individuated, are separated by the disjunction between formative life, a mysterious force working by analogy with the power of desire, and inert matter, which receives its systemic structure from the activity of what Kant will refer to as an immaterial principle or, in his more vitalist moments, *Lebenskraft*. It is this same disjunction between life and matter that is at work when Kant enforces the separation between the formative power of the whole functioning by means of final causality, on the one hand, and the efficient

mechanical causality governing the functioning of parts, on the other. Though some passages of the *Opus Postumum* give the impression that Kant stresses the latter aspect when dealing with organic beings, for example when he discusses 'natural machines', the general tendency in these notes is ultimately to reinforce the anti-hylozoism that had already blocked the inquiry into the self-organization of the living in the third Critique. Though shifted from its function as a case for judgment, as a causal anomaly, to its place within the system of the moving forces of matter, in terms of the ontology of individuation the basic traits of the concept of organized beings in the *Opus Postumum* are not in contradiction with those forwarded by the *Critique of Judgment*. Reciprocity, totality and autoproduction – which together make up the concept of self-organization – remain the three necessary conditions for what is now defined as 'the organic'.<sup>12</sup> These structural and causal properties of the organic also issue into the selfsame inference with regards to an immaterial principle, analogous to a cognitive or conceptual power of desire, which we encountered in the *Critique of Judgment*. Indeed, the *Opus Postumum*, at the same time as it seeks to include the organic in the division of bodies within the system of the moving forces of matter is often even more trenchant in its regulative 'psychovitalism',<sup>13</sup> its postulation of life as an immaterial and essentially cognitive organizing principle:

A natural thing which, as the movable in space, is an object of the outer senses (outer perception), that is, *matter*, cannot be *self-organizing* through its own forces and form organic bodies. For, since this requires a composition of the material according to purposes, matter would have to contain a principle of the absolute unity of the efficient cause – which, as present in space, would be an atom. Now all matter is divisible to infinity, and atomism, as a ground of explanation for the material composition of bodies from smallest parts, is false. Hence only an immaterial substance can contain the ground of the possibility of organic bodies; that is, matter does not organize itself, but is organized by what is immaterial. One is not, however, for that reason, entitled to assume this efficient cause to be a soul inherent in the body or a world-soul belonging to the aggregate of matter in general; it is rather, only an efficient cause on the analogy with an intelligence: that is, a cause which we can represent to ourselves in no other way, since there may be quite other kinds of forces (and laws by which those forces act) than those of our thought. All organized bodies are systems; and we in turn organize the natural system.<sup>14</sup>



There is a considerable tension here between, on the one hand, the use of material explanations, mechanistic and dynamic, for the sake of the unity of experience and, on the other, the psychovitalist postulate of immaterial ideality.<sup>15</sup> Though the organic will always remain for Kant the site or sign of a possible transcendence within nature, it is nevertheless clear that in terms of the overt concern within material individuation that characterizes the *Opus Postumum* as an inquiry into the question ‘How does matter produce a body?’,<sup>16</sup> it is even more urgent than it had been in the *Critique of Teleological Judgment* to provide some account of the real material operations that individuate organic bodies and govern their persistence as dynamic complexes of wholes and parts, complexes manifesting ‘a work without respite aimed at resolving a permanently renewed problem’.<sup>17</sup>

In light of our treatment of the Antinomy, Kant’s employment in the *Opus Postumum* of the term *natural machines* to designate organized beings cannot but elicit perplexity. Far from showing a return to the Cartesian iatromechanics that the *Critique of Judgment* had indicted, deriding as it did the legitimacy of the analogy of an organism to a clock, the definition of organisms as natural machines reveals the fallacy inhering in the classical opposition between organisms and machines as respectively teleological and non-teleological systems. When Kant writes: ‘Organism is the form of a body regarded as a machine – i.e. as an instrument (*instrumentum*) of motion for a certain purpose’,<sup>18</sup> he is not equivocating with regard to his earlier theses.<sup>19</sup> Rather, he is showing the presence of an immaterial principle of organization (a purpose or concept) at the heart of machines themselves. Therefore, both organism and machine can only be grasped in their defining individuality if the mechanism (*Maschinenwesen*) governing the connection of their parts, the ‘particular form of the moving forces (set into a certain matter, by nature) which makes them capable of an artificial [motion]’,<sup>20</sup> is isolated and understood in terms of the purpose that animates them. Thus, the definition of organisms as natural machines, entities individuated and guided by their organization, what Kant defines as ‘the concept of a purposive mechanism of matter’,<sup>21</sup> is not a retreat with regards to the psychovitalism which reared its head in the *Critique of Judgment*; rather, it further legitimates the recourse to an immaterial principle that individuates organic entities according to their purposive activity, now understood by analogy with goal-directed artificial motion.

As the line of reasoning at work in the above passage reveals, Kant contemplates the option that the organic – this exception to the sovereign and unifying determinations of the understanding – may itself be in

need of its own *principle* of individuation. Once again, this demonstrates that Kant belongs to that tradition of thinkers, largely coextensive with the history of philosophy, which, according to Simondon's verdict,<sup>22</sup> think individuation only on the basis of individuality, whether this individuality be that of a separately existing metaphysical principle or that of a formal, but no less imposing, criterion. For Kant, it goes without saying that the kind of self-organization that the concept of natural purposes permits us to reflect upon cannot be thought in any other way than with the aid of principles. Since he regards the indivisibility of matter as inconsistent with the concepts of the understanding, Kant objects to the realist option of atomism, whereby the principle for the individuation of material bodies is another material entity that can be located *in the world*, and defends the analogical function of the immaterial principle. Whilst shying away from any ontological commitments regarding the genesis of self-organization, this cannot but result, as we saw in Chapter 1, in a defence, for the sake of practical reason, of a minimalist theism.

The relationship between causality, activity and individuation is also reinforced with the distinction made at various junctures in the *Opus Postumum* between acting, doing and operating (*agere, facere, operari*). As Kant writes, 'Matter causes (*wirkt*). Will acts (*Willkuhr handelt*). He who acts (*handelt*) according to purposes (*artificialiter*) operates (*operirt*).'<sup>23</sup> Thus, the question regarding the modality of individuation that presides over the domain of the organic can be restated as 'What is an operating system?' or even 'How can a system operate if matter cannot self-organize?' As we have seen, the treatment of organized beings in the *Opus Postumum*, whilst adding some precision to the definitions presented in the *Critique of Judgment* and situating the problematic concept of organized beings squarely within a division of the natural sciences based on the delineation of a system of the moving forces of matter, essentially reinforces the positions that had engendered the unconvincing outcome of the earlier treatment of natural organization. The *Critique of Judgment* had revealed an impasse in Kant's thinking, motivated by the impossibility of establishing a causality of self-organization for natural systems within a fundamentally dualistic, anti-hylozoist perspective where matter and life are disjoined, with the former functioning as *principle* of individuation whilst the latter is but the inert or passive *material* of individuation.

In this sense, whilst they are now closer to the status of scientific objects, having attained a place in the system of nature through the quasi-transcendental division of physical bodies into organic and inorganic

and through their new status as natural machines, the anomaly of organized bodies is not dispelled in the *Opus Postumum*. Their modality of individuation is yet truly to overcome the ambivalent and inadequate recourse to cognitive analogies of desire and technical production, which make the self-organization they exhibit into an ultimately chimerical notion: not strictly possible but required for experience, regulative and problematic but elicited by a sort of ontological irruption into the conditions of judgment and cognition in general.<sup>24</sup> However, much in the way that the discussions of phylogeny and ontogeny in the *Critique of Judgment* might provide possible avenues to break the deadlock produced by the disjunction between life and matter by linking the question of organization to a reflection upon its genesis, in the *Opus Postumum* we discern traces of a trajectory that seems to have been ushering Kant towards transformations in his transcendental philosophy, transformations making it possible to overcome the impasse of organized beings, the aborted emergence of a material modality of individuation which had marked the Critique of Teleological Judgment.

What we have encountered up to this point in Kant's treatment of organized beings is in many respects a philosophy of individuality rather than a philosophy of individuation. This means that with regard both to the individuation of objects and the individuation of systems, a *principle* of individuation commands the procedures (cognitive or material) whereby an entity comes to be isolated, either in an understanding functioning by means of concepts or in terms of the problematic idea of an inner purposiveness. When in his criticism of atomism Kant remarks that organization must be governed by a 'principle of the absolute unity of the efficient cause', this is a sign that it is not the process of individuation (ontogenesis) that is being addressed here, but rather the ultimately conceptual grounds of individuality itself. In other words, individuality can only be accounted for by individuality, a principle which also lay behind Kant's strict fidelity to *generatio univoca* as the only viable explanation for the (re)production of organic forms.<sup>25</sup> Hence, the auto-production of an organic entity can only be accounted for by a *concept* of this entity as totality, a concept functioning both as efficient and final cause. Yet, and this is the crucial issue, *this concept is itself already individuated*. Or, to be more precise, the regulative approach to the organism cannot but view it as dominated by an idea of the whole that cannot itself be decomposed.<sup>26</sup>

This is why, even with the incorporation of organic individuation into the *Opus Postumum's* system of the moving forces of matter and its bodies, in the final analysis the organized being as individual system

does not subvert the persistence of a representational approach to individuation in Kant, an approach that binds individuation to the concept and to a determination of the principle or principles governing it. In short, we remain within the bounds of an inquiry into the conditions of representational unity unable to account in any but an analogical way for the genesis and the reality of the self-organization that Kant himself had the merit of introducing so openly and provocatively into philosophy. Not only that, but as Guyer rightly notes, the argument which says that once infinitely divisible matter cannot provide the grounds of its limitation, the true principle of individuation of organized beings must reside in the simplicity of an already individuated immaterial idea constitutes a veritable paralogism of pure reason; that is, an illegitimate argument from the logical requirements of individuality to its ontological basis – its principle of individuation.<sup>27</sup> The transformation in the approach to individuation which can be gleaned from Kant's posthumously published notebooks is therefore not to be sought in the continuation of the debate over the organic, but is instead to be found in his redefinition of the relationships between matter and mechanism and his tentative depiction of a single dynamic matter that would ground the unity of experience.

The greatest innovation of the *Opus Postumum* with regard to Kant's system thus lies in the introduction of the concept of the ether or caloric. Ultimately, the necessity of this concept arises out of the insufficiency of Kant's previous concept of matter for securing the unity of experience.<sup>28</sup> Over and over in the *Opus Postumum*, Kant reaffirms the necessity of grounding the unity of experience in a unity of matter, a matter that is now no longer the aggregate object of cognition, but rather a dynamic unity subtending all instances of mechanist causation and mechanical organization. Thus Kant can write that 'all matter, conceived together with its moving forces, forms *one system*. Its manifold parts I regard, on the other hand, *sparsim*; the same matter, however, I regard, on the other hand, as an absolute, *coniunctim*, as belonging to no greater whole.'<sup>29</sup>

It is this 'absolute matter', which cannot itself be experienced but which must be presupposed 'for the sake of experience' that forms the object of Kant's so-called 'ether proofs', where we see the workings of a veritable transcendental materialism, the attempt to think the non-empirical determinations of a single matter understood as the field of individuation for all the bodies that constitute the objects of our cognition, a cognition that cannot experience this matter as such but must postulate it indirectly. In this regard, it is crucial to note that in the

*Opus Postumum* matter is no longer coterminous with mechanism. The reason for this is that in the delineation of his world-system Kant confronts the question of individuation in a radically different manner. This speculative development cannot fail to affect the hostility to hylozoism that had dominated the discussion of teleology in the *Critique of Judgment* and echoes in that of natural machines in the *Opus Postumum*. This is not just a consequence of the attempt at situating the question of the in/organic difference within *a unified system of matter*, it also results from the wish to subsume this hitherto central difference under the more general problem of material ontogenesis *tout court*.<sup>30</sup>

There are three modalities of individuation that play a key role in the *Opus Postumum*. Firstly, that of the ether or caloric, or more generally *matter*, explicitly defined as an individual, as the 'One and All of outer sense-objects'<sup>31</sup> – albeit an individual which, as the imperceptible condition of the unity of nature and systematicity of cognition, cannot itself be experienced ('there is no experience of what is indivisible').<sup>32</sup> Secondly, the realm of physical bodies, no longer merely individuated by cognition, but rather self-individuating. They are defined as follows: 'A physical body is a self-limiting whole, by the united attraction of the parts of a quantity of matter'.<sup>33</sup> These physical bodies in turn are divided into inorganic and organic, with the latter being conceived of as natural machines, in the terms discussed above. Thirdly, we have the subject of self-affection, a subject whose experience of autoproduction and organicity is the precondition for the analogical reflective judgment about organized beings. As Kant writes in a fragmentary note, which should delight many a disciple of Merleau-Ponty: 'To know oneself in experience as an organic body.'<sup>34</sup>

It is in recognizing the gap between matter and bodies (between the first and second of our modalities of individuation), between the 'internal influence of body-forming matter' and the 'laws of the *external influence of bodies* upon one another'<sup>35</sup> that the *Opus Postumum* opens up the space for a genuine philosophy of individuation. It can only do so by breaking the constraints imposed in the *Metaphysical Foundations* on the definition of matter, and speaking of a 'body-forming matter', or what Kant elsewhere refers to as a 'radical world-material'.<sup>36</sup> If we conceive this preindividual or precorporeal matter as primary *vis-à-vis* the mechanical realm of external causality we begin to see a manner of actually problematizing Kant's own distinction between the organic and inorganic, and of returning the problematic of organized beings to a question of individuation rather than to the presupposition of individuality expressed in the immaterial and conceptual unity of purposive

organization. As Kant writes: ‘The moving force of matter is now classified, according to its reciprocity, into the force of free matter (*materia soluta*) and into that of matter which is bound by itself (*ligata*) – that is, matter which forms bodies and which limits its own space by attraction of its parts among each other.’<sup>37</sup>

It is in this passage between the realm of preindividual free matter (*materia soluta*) and that of bounded individuals or physical bodies (*materia ligata*) that the question of organized beings must be relocated. In other words, our attention should shift to the tendency in Kant’s late works to move beyond the anti-hylozoism which had produced the impasse of the *Critique of Judgment*. This tendency hints at the formation of a philosophy of individuation *qua* transcendental materialism, wherein the distinctions between the organic and the inorganic, the mechanical and the teleological are problematized and subordinated to a general treatment of modalities of individuation. It is here that we find Kant’s intrepid speculations about the transcendental *individuum* that would provide the preindividual field for the constitution of the bodies that in our experience are represented as objects, speculations that are founded on the ‘new conviction that any matter of particular form, hence any physical body, is conceivable only on the basis of a universally distributed, oscillating ether’.<sup>38</sup> In these notes, as Eckart Förster paraphrases rather lyrically, the cohesion of physical bodies, their individuation and limitation, is an effect of the ‘tremblings’<sup>39</sup> of this purely transcendental ether, this radical world-material lying beyond the limits of experience but nonetheless indispensable to our systematic grasp of the degrees and varieties of individuation within nature. Of course, on the basis of such a preindividual field, we may ask what becomes of the notion of bodies as *self-limiting*, and of the related notion of nature conceived of as internal difference. We shall return to these questions in Chapters 5 and 6.

## 2.2 Autonomy and allonomy: Kant’s biophilosophical legacy

One of the leading paradigms in the biological applications of the contemporary philosophy of individuation, the theory of autopoiesis, can be read as an attempt to remodel, and to some extent displace, the in/organic difference at play both in the *Critique of Judgment* and aspects of the *Opus Postumum*. Whilst it may alternate between an emphasis on the natural or the machinic components of the concept of ‘natural machines’, autopoiesis remains articulated around the distinction between self-organization and dependence on external causes – in the terminology

pioneered by the work of Chilean biologists Francisco Varela and Humberto Maturana, on the distinction between *autonomy* and *allonomy*.<sup>40</sup> Rather than remaining with Kant's analogical formulation of an immaterial principle of individuation for the organic, the research programme of autopoiesis is best grasped as an attempt to naturalize those special beings marked by the causal and genetic structure that Kant had simultaneously formulated and disavowed. In other words, to endow the 'empirical anomalies'<sup>41</sup> which Kant isolated as exceptions to the hegemony of mechanicism with both finer formal and operational specification *and* ontological dignity. The twist thus proposed to the problem of individuation is best captured by Niklas Luhmann's question: 'In what sense and under what constraints are individuals individuals for themselves?'<sup>42</sup> The issue is no longer that of the intelligibility of the objects of thought or the elements of the real, but rather concerns the operational and relational conditions that immanently establish the consistency of an individual, allowing an entity to determine the conditions of its own intelligibility. This is how Maturana and Varela define an autopoietic machine:

a machine organized (defined as a unity) as a network of processes of production, transformation and destruction of components that produces the components which: (i) through their interactions and transformations regenerate and realize the network of processes (relations) that produced them; and (ii) constitute it as a concrete unity in the space in which they exist by specifying the topological domain of its realization as a network.<sup>43</sup>

Thus, formally speaking, Maturana and Varela maintain the crucial characteristics first formulated by Kant's natural purposes, to wit, the *unity* of self-organization, the recursive reproducibility of its parts or components and its spatial self-limitation. In brief, they maintain the formal requirements of individuation as unilateral distinction.

Though the many references within this field to its Kantian matrix should perhaps suffice, once we consider its guiding traits, the filiation, from critique to autopoiesis and related theories of self-organizing and autocatalytic systems, is indisputable.<sup>44</sup> Bracketing its symbolic and intrasystemic use and prior to its analogical capture, Kant's own concept of organic individuation is deeply operational, defining an organized being as one whose elements or component parts are its own products, whose causality is circular and whose reproduction is self-referential. In brief, a being defined by the maintenance and reproduction of its

own unity and organization. It is this type of causal relationship, whereby all the elements and relations within a being are products of that being itself, where the unity verily overdetermines the relationship between elements, that Kant regarded as ineluctably problematic for a discursive rather than an intuitive intellect, one condemned by finitude to a cognition of objects which is inescapably *partes extra partes*. Though this understanding of individuation by means of the distinction between discursive and intuitive appears to be grounded on a very traditional approach to mereology (the theory of the relations of parts to whole and parts to parts within a whole), it should be noted that Kant was deeply sensitive to a theme that accompanied the rise of modern biology; namely, the subsumption of the relation of parts to wholes under the question of the formative causal relationships undergone by organized beings, by their parts and by the relations between these parts.<sup>45</sup>

Embryonically in Kant, and in a far more explicit sense with contemporary theories of self-organization, we are thus confronted with an *operational turn in the philosophy of individuation* inevitably engendering new guiding concepts and disputes than the ones embedded in the traditional construals of individuation as a matter of intelligibility, designed to accommodate a science of universals and a predication of essences. Already with Kant, albeit in a purely problematic register, philosophy is no longer as explicitly 'forgetful' of the operations of ontogenesis as hylemorphism and atomism, which Gilbert Simondon's seminal work in the philosophy of individuation designated as the main tendencies in the study of physical individuation by way of *principles*. What a consideration of autopoiesis and its Kantian origins reveals is that an assessment of the contemporary stakes of the ontology of individuation, whether critical or programmatic, requires that not only genesis but functioning, or, to use Simondon's terms, not only individuation but individualization, too be included within a critique of the traditional image of individuation. We can therefore argue, following our inquiry into the Kantian encounter with the problem of the organic, that any critical appraisal of the philosophy of individuation cannot fail to address the very distinction which – though founded on Kant's understanding of individuation as unified representation, as subsumption of a (particular) object under a (universal) concept – forces the Critical philosophy to face the enigmas of natural or material production: the distinction between autonomous and heteronomous (or allonomous) individuation.

Undoubtedly, many links can be made between, on the one hand, hylemorphism and atomism, and, on the other, the guiding dichotomy in a contemporary paradigm which distinguishes, in a resolutely Kantian



vein, between systems exhibiting a recursive and self-referential causality and entities that are both formed and function under the effect of external causes. For example, we could see the type of Newtonian causality endorsed by Kant as essentially atomistic in its individuation of objects as determinate space-time positions within a causal chain. Conversely, we might discern a hylemorphic schema in the Kantian definition of the living as organized being, a definition that depends on a particular operational structure overdetermining its material components and ultimately issuing into a conception of 'life' as a force that moulds and unites the inert multiplicity of matter. Nevertheless, with Kant and the philosophers and biologists following in his wake there is a tendency to shift the focus from principles of individuation to a determination of the operations or processes that subtend the formation of individuals, individuals that are, in some sense or another, *for themselves* and not just for us *qua* cognizing, representing subjects. This anomaly of the organic has considerable consequences.

Surely, it is extraordinary that more than 200 years after Kant's presentation of his Antinomy of Teleological Judgment a research programme avowedly concerned with proposing a biological phenomenology that would finally outline a necessary and sufficient definition of the living would base its entire stance on the distinction between autopoietic or self-regulating systems, on the one hand, and allopoietic or externally controlled systems, on the other. Though one could argue that the distinction is no longer predicated on a dispute regarding the temporality and structure of causal trajectories, but is displaced onto the plane of paths and patterns of information, on the basis of a machinic *a priori* decreeing the sovereign difference between input/output systems, on the one hand, and systems that are informationally and operationally closed, on the other, we are nevertheless still in the presence of a transcendental partition between autonomic and allonomic systems, a seemingly ineluctable grid to which our every encounter with nature, be it phenomenological or experimental, must submit. The fact that we have passed from transcendental reflection to mathematical modelling and computer simulation, or that the question of teleology has been allegedly disqualified, does not alter but rather reinforces our conviction that from the point of view of individuation the problem of the genesis of these individual forms maintains its critical and ideological urgency. Whilst the domain of application of the Kantian antinomy may have changed, and though it may have now undergone a 'mechanical' conversion, many of the same problems remain with the postulate of a categorial distinction between two modalities of individuation, self-organizing and externally

caused. In this regard, it simply is not true that the 'elimination of the notion of teleonomy as defining feature of living systems changes the outlook of the problem completely'.<sup>46</sup>

Though the object of critique has shifted from the paradigms isolated by Simondon, the maxims of his philosophy of individuation remain pertinent for a critical assessment of what we may call the Kantian legacy in philosophical and scientific ontologies concerned with the definition of organized beings. Indeed, both allonomous and autonomous conceptions of individuality are predicated on the presupposition of constituted individuals, whether these be organismic unities that produce their own boundaries and iteratively recreate and transform the relationship between their informational component-parts or subsystems, or physical entities subjected to a principle of external causality. By postulating that any account of the living *begin* with self-maintaining unities (and that autopoiesis is indeed a necessary and sufficient condition for defining the organization of the living),<sup>47</sup> the theory of autopoiesis, under the guise of an approach concerned with operation, arguably repeats the obfuscation of operation that Simondon identified as the cardinal sin underlying the traditional image of individuation.

By making the individuated into the target of the investigation, autopoiesis denies the possibility that there might be a domain wherein the distinction between autonomic closure and allonomic external determination remains undecided, a domain of operations that would account for the production of entities subjected to these two apparently opposed regimes of organization. It is symptomatic of the shortcomings of the autopoietic account that it eventually results in the claim that the autopoietic production of a system *qua* self-referential network of relations can be decoupled in principle from its ontogenetic and evolutionary conditions of realization. Though, as Malik notes, the two conditions for autopoiesis are the 'integrated realization of intrinsic relations' and the 'concrete realization of the organized network', this realization does not as such truly transform the constitution of the functionally autonomous network. In other words, 'for Maturana and Varela there can be no question of the material onto-genesis of autopoietic organization as such'.<sup>48</sup> In their thinking of organization *a system is either autopoietic or it is not* and there obtains no production of autopoiesis from allopoiesis.<sup>49</sup> Furthermore, we witness a return, perhaps inevitable once unity is presupposed and maintained rather than generated, of a hylemorphic independence of organization from its material substrate: 'The organization of a machine implies matter, but matter does not enter into it as such.'<sup>50</sup>

Subjecting accounts of individuation to the presupposition of constituted individuals fails to maintain the promise of autonomy: to wit, that a system can ground its own unity in a virtuous circle of self-organization and reproduction. By establishing an *a priori* distinction between autonomic and allonomic systems, the Kantian legacy that the theory of autopoiesis endeavours to naturalize leads to an outlook that continues to depend both on the presupposition of unity and its (paradoxical) evidence. This unity, decoupled from an ontogenetic explanation that would delineate its conditions of realization and emergence, ends up offering a transcendent anticipation of the very processes supposed to embody it. Furthermore, the operations that subtend this unity are prevented from accounting for how and why a given type of individual comes to be. Instead, they are merely enlisted to exhibit and diagram the operations of self-preservation and self-regulation of the individual, a task which may be valuable in itself but ultimately falls short of exhausting the ontology of individuation as such, even within the 'domain' of the living alone.

In Simondon's approach (which we shall investigate in Chapter 5) it is not autonomous closure and self-reference that define this supposedly higher level of organization, but rather a more constant and more intense openness to the disparateness and tension at the heart of preindividual being, whose problematic inconsistencies are resolved into local and relative individuations. An organized being is no longer envisaged as an essentially bounded, substantial unity, but rather as a convergent set of operations that follow up an initial individuation with a constant process of individualization. The relative distinction of the individual from its environment is carried into a constant renegotiation of its internal milieu and its external relations. The living is a 'theatre of individuation', at once a 'system of individuation, an individuating system, and a system that individuates itself'.<sup>51</sup>

### **2.3 Events, prehensions and subjective aim: the philosophy of the organism**

Whitehead is rumoured to have once quipped to a friend that Kant should have written his three critiques in reverse order, starting with the *Critique of Judgment*. In light of the previous discussion and the designation of Whitehead's enterprise as a 'philosophy of the organism' this would seem to suggest that instead of maintaining the in/organic partition proposed by Kant, Whitehead is proposing a generalization of the principle of self-organization, such as to make it coextensive

with ontology itself. Instead of reaffirming the partition between two modalities of natural individuation according to their causal structure and organization (the autopoietic route to the in/organic difference) we would observe the inversion of the Kantian project, the demotion of the mechanistic approach to individuation to the rank of a regional and abstract case of a generalized organicism. Whilst it may have much to recommend it in terms of first impressions, such a straightforward inversion is, in the final analysis, an unsatisfactory and truncated portrait of Whitehead's contribution to the philosophy of individuation. Though the idea of a reversal of the Critiques is indeed an apposite, if merely allusive, image, it is simply insufficient if we wish to account for the radical transformations effected by Whitehead when it comes to the very parameters of individuality and individuation at work in Kant's philosophy.

I say this, of course, in spite of one of Whitehead's better known pronouncements, a veritable profession of anti-critical faith if ever there was one:

the philosophy of organism is the inversion of Kant's philosophy. The *Critique of Pure Reason* describes the process by which subjective data pass into the appearance of an objective world. The philosophy of the organism seeks to describe how objective data pass into subjective satisfaction and how the order in the objective data provides intensity in the subjective satisfaction. For Kant, the world emerges from the subject; for the philosophy of the organism, the subject emerges from the world – a 'superject' rather than a 'subject'. The word 'object' thus means an entity which is a potentiality for being a component in feeling; and the word 'subject' means the entity constituted by the process of feeling. The feeler is the unity emergent from its own feelings; and feelings are the details of the process intermediary between this unity and its many data.<sup>52</sup>

It is clear then, that as any interesting attack of one philosopher upon another, and as is frequently the case when philosophers stake their claims by way of a polemic against Kant, this purported inversion is more accurately to be considered as a *displacement*.

The transformation in the function attributed to the term 'object' is a case in point. To prepare the way for his conception of the object as what is integrated, prehended or 'felt' ('a potentiality for being a component in feeling'), Whitehead is obliged to undertake a thoroughgoing alteration of the very scientific and speculative bases that Kant's original

conception of the object had drawn upon. To begin with, the notion of object, so central to the Kantian approach to individuation, as we took pains to show in Chapter 1, is set free of the transcendental hegemony of spatiotemporal individuation. We encounter here Whitehead's relentless attack on what he termed 'the fallacy of simple location': the notion that worldly matter is unequivocally individuated as punctually present and instantaneous, *hic et nunc*.<sup>53</sup> As Whitehead sees it, our comprehension of physical individuation must take leave of the Newtonian obsession with 'this bit of matter occupying this region at this durationless instant'.<sup>54</sup> This constitutes the negative and ceaselessly renewed task of preparing the field for an alternative to the entire panoply of transcendental and ontological options that depend on spatiotemporal individuation and its articulation onto a subject/attribute notion of individual substance.

For Whitehead, any subordination of individuality to the representations of localized and instantaneous objects amounts to peddling 'simplified editions of immediate matters of fact' – even when objects are unburdened of substantive ontological commitments, as in Kant.<sup>55</sup> Only once these mechanistic abstractions are suspended and analysis descends to the ultimate concrete realities (the *events* of *Concept of Nature* and *Science and the Modern World*) can objectivity be envisaged anew as an ingredient in processes of subjective ontogenesis. Recalling the discussion of events in Kant's Second Analogy (Chapter 1, Section 1.3) and comparing it to Whitehead's own philosophy of nature, the gaping distance between these two positions becomes evident, so that *at this level* it is indeed perspicuous to speak of an inversion. The Whiteheadian event, rather than being conditioned in its unity by an all-encompassing system of spatiotemporal reference, is itself constitutive of the regularities on whose basis we could come to abstract space and time as forms of intuition. From its 'own' standpoint, termed by Whitehead as a 'percipient event', these putative 'background conditions' for experience are but locally useful fixations. Space and time extrapolate enduring structures from the overlapping trajectories and transformations of events (their 'life-histories') and from the patterns that these contain, the 'concrete facts' of the universe that Whitehead terms 'organisms'. This containment, as we shall see, is altogether unlike that which has made of space and time the transcendental envelopes<sup>56</sup> *par excellence* for the metaphysics of natural science.

Objects, in turn, provide the representational fixations of subrepresentational events: icons of becoming. This is because events, being unrepeatable, are also unrecognizable, inevitably enmeshed as they are

in the passage of nature. To use Whitehead's terminology, objects are *ingredients*, they *ingress*:

the character of an event is nothing but the objects which are ingredient in it and the ways in which those objects make their ingress into the event. Thus the theory of objects is the theory of the comparison of events. Events are only comparable because they body forth performances.<sup>57</sup>

The solidarity of cognition and individuation is likewise undone, the new theory 'edge[s] cognitive mentality away from being the necessary substratum of the unity of experience. That unity is now placed in the unity of the event. Accompanying this unity, there may or may not be cognition.'<sup>58</sup> 'Object' thus takes two fundamental senses in Whitehead: firstly, the object as *datum*, as material for the prehension of the disjunctive multiplicity of the world into the relative and provisional interiority (or 'privacy') of a subject-in-process; secondly, the immaterial eternal object, whose capture by or ingress in processes of individuation (conrescence) is responsible for bestowing a certain degree of order and stability upon them, as well as, most significantly, what makes of individuation always a matter of deciding upon a potential. For the time being, we will remain with the first, 'dative', dimension, and will only touch briefly upon the question of eternal objects once we consider the thorny issue of Whitehead's own promotion of a teleological modality of organized individuation.

The transformation in the status of both subject and object that I have begun to adumbrate is a vital condition for the eventual success of Whitehead's promotion of an *interactive ontology of individuation*, of the sort we shall encounter, in quite a different guise, with Simondon and contemporary cognitive and developmental research (see Chapter 5, Section 3). Though concerned with providing a metaphysics adequate to the transformations in the sciences of his time, rather than, for example, a speculative defence of Eucharistic transubstantiation, Whitehead, like Leibniz before him, is deeply preoccupied with accounting for the possibility of interpenetration (or, in his own terminology, 'interfusion').<sup>59</sup> For, if 'substances can interpenetrate, then spatial relations cannot be the fundamental principle of sameness and difference'.<sup>60</sup> Yet rather than arguing from indiscernibles for an 'internal principle of distinction', whereby 'it is by means of things that we must distinguish one time or place from another, rather than vice versa', Whitehead's process thinking effectively removes the strict separation whence originates the dispute

between intrinsic and extrinsic principles of individuation.<sup>61</sup> To put it in other words, Whitehead's notion of prehension obviates the absolute distinction between relations and their relata, as well as the dispute over the primacy of the one over the other.<sup>62</sup> As Richard Rorty comments in an early article on Whitehead: 'Relations are as unrepeatable as anything can be, and an actuality which consists of internal relations to other entities is unrepeatable precisely by virtue of being a congeries of such relations.'<sup>63</sup>

Whitehead effectively prolongs a path that Leibniz himself had anticipated, that of considering individuation in terms of an activity that does not presuppose the static 'notion of independent individual substance'.<sup>64</sup> This explains Whitehead's focus, in Russell's wake, on two tendencies at play within Leibniz's vast and fragmentary *corpus*:

One was that the final real entity is an organizing activity, fusing ingredients into a unity, so that this unity is the reality. The other point of view is that the final real entities are substances supporting qualities. The first point of view depends upon the acceptance of internal relations binding together all reality. The latter is inconsistent with the reality of such relations.<sup>65</sup>

According to the first point of view, then, space and time are themselves abstractions from a primitive domain of individual and individuating activity, whose seat is in these ontogenetic points that Whitehead calls (depending on the speculative context) events, organisms, or actual occasions. As he insists in *Concept of Nature*, rather than providing us with the absolute formal envelopes of all experience, space and time are generated by the interaction of events that cannot themselves be spatiotemporally individuated:

The passage of events and the extension of events over each other, are in my opinion the qualities from which time and space originate as abstractions ... Space, like time, would appear to be an abstraction from events. According to my own theory it only differentiates itself from time at a somewhat developed stage of the abstractive process.<sup>66</sup>

As in Leibniz, rather than receiving their differentiation from these absolute envelopes of experience, it is 'by their internal differences ... that they distinguish themselves, these differences being susceptible of grounding their different situations in space and time.'<sup>67</sup>

Let us pause in our exposition to note the peculiar and perhaps symptomatic fact that, in 1928, the very year that Whitehead delivered the Gifford lectures that came to be compiled as *Process and Reality*, Martin Heidegger's *Logik* lectures at Marburg also fell under a similar Leibnizian spell. In these lectures Heidegger attempted to draw out Leibniz's doctrine of judgment and its thematization of the principle of reason from the individuating and self-propelling activity of these formative centres that go by the name of monads. The *vis activa* of these monads was conceived under the aegis of *drive*. In Heidegger's words: 'Unity as the conferral of unity is active, *vis activa*, drive.'<sup>68</sup> Only for Whitehead, in our imaginary *mise-en-scène*, to echo that what he calls 'the individualized pattern': 'expresses a certain unity of character uniting the underlying individualized activities'.<sup>69</sup> Besides these effects of resonance, is there something more precise to be discerned in this shared orientation and revitalization of a Leibnizian project? I think so; above all, in terms of the strategic function that a Leibnizian orientation in thought, taken as an approach wherein activity is constitutive, can have for the sake of an *agon* with common sense, with the petrified beliefs structuring the field of human behaviour and cognition, whether in scientific research or everyday practice.

Though Heidegger's essential suspicion of the physical sciences and Whitehead's relentless conceptual idiosyncrasy, coupled with a cheerful disregard for the strictures of the history of philosophy, ultimately make these two thinkers diverge, their stellar Leibnizian friendship is best summed up in the urgent requirement that an atrophied logic make room for the vigorous intervention of a 'new metaphysics', or of a more fundamental ontology. Though perhaps one cannot overemphasize to what extent these two thinkers could only meet in Leibniz, their strange kinship goes further. Both hold that a new foundation of the categories of logic, whether by way of a physico-mathematical genesis or an existential analysis, must terminate the Aristotelian legacy of the subject/attribute structure, together with the 'Cartesian' correlation of a disembodied subject and a mortified world of mechanical, spatiotemporal individuations. As Heidegger declares: 'Our guiding problem is the way logic is rooted in metaphysics, the way the doctrine of judgment is rooted in the doctrine of substance, and the identity theory in the monadology.'<sup>70</sup>

What new metaphysics can rise out of a return to the monadology and offer a non-Aristotelian foundation for logic? The promise of Leibniz lies precisely in providing a concept of individuality which is not that of a disincarnate 'representer', nor that of a subject qualified by attributes,



but rather one that foregrounds an interactive and temporally dynamic unity-of-organization. In this regard, Michael Heim, the translator of Heidegger's lectures, has done us a rather baffling service. In his effort to render the dynamism that, for Heidegger, defines the Leibnizian monad as a unity of organization ceaselessly transcending and comprehending its world, Heim, obviously at pains to distance any disembodied or formal notion of representation, chooses to translate Heidegger's *Vorstellung* as 'prehension'! And he does so in full awareness of the Whiteheadian connection:

In translations of German philosophy the customary reading of '*Vorstellung*' is '(mental) representation,' though sometimes 'notion' or 'idea' is also used. In discussing the monad's mode of apprehension, however, Heidegger plays on the temporal, out-stretching meaning of '*vor-stellen*' and thus suggests the necessity of a different English translation. To 'pre-hend' does not share the same root meaning as *stellen* (to place) but derives from the Latin *prendere* (to grasp, to reach). 'Prehension' is nevertheless connected with 'apprehension' and has enjoyed a felicitous usage in English-language philosophy influenced by Leibniz, namely in the speculative thought of Alfred North Whitehead.<sup>71</sup>

In a sense, this annotation highlights a genuine affinity: the abstract determination of an object standing against a subject is inimical to both our philosophers. But in Heidegger's determination of the monad as self-transcending drive, prehension is thought above all as a centrifugal force, whereby the monad unifies 'in advance' a manifold of experience, such that its activity functions as an anticipatory principle of individuation, which, as in Leibniz, cannot itself be generated (save by creation). Heidegger's monad is marked by a *finitude* whose 'basic feature is unification, and unification as pre-hending, as surpassing in advance'. When Heidegger asks: 'What makes each monad ultimately just this particular monad? How is this *individuation* itself constituted?', barring creation as principle, he can only turn to this finitude, to the teleology<sup>72</sup> of its transcendence, as well as to the resistance of the manifold ('what the drive does not drive')<sup>73</sup> for an answer.

In light of its treatment of the problem of individuation, Whitehead's adoption of a distinctly Leibnizian metaphysical research programme appears far more radical than Heidegger's account of drive as self-transcendence, as well as less tainted with the anthropic hubris that equates human activity with authentic individuation. This is in great

part because Whitehead, in his parallel effort to confront 'the deep roots that logic has in metaphysics', is altogether more sanguine about the chances of an outright transformation within metaphysics itself. In short, for Whitehead the consequences of holding true to that part of Leibniz's doctrine which seeks all reasons in the 'final real entity' understood as 'organizing activity' are such that we should neither hope nor wish to *ground* the logic of judgment in a critical return to the questions of subjectivity and representation. Rather, we are enjoined, in dialogue with the daring constructions of the physical sciences, to give rise to a new logic of experience, in the guise of what Deleuze called 'a logic of events'. In this logic there is no room for the *a priori* privileges or the horizontal envelopment of a Dasein conceived as a 'structurally antecedent reaching and gripping'. For Whitehead, it is perfectly uncontroversial to state that entities transcend one another, in the sense that their interrelation can take the shape of a reciprocal envelopment. Any actual occasion may transcend. Equally, any actual occasion may be transcended. The whole theory of prehensions, which cannot presuppose either constituted objects or constituted subjects, is thus entirely diagonal to the stark and divisive demand posed by Heidegger: 'Unity should not be the subsequent assembling of a collection, but the original organizing unification.'<sup>74</sup> When it comes to Whitehead, in this regard very close to Deleuze, such an injunction, that something *either* be One *or* Multiple, falls on deaf ears.

It is in the prehensile nature of the processes of concrescence, whereby the Many become One,<sup>75</sup> whereby 'monads' are individuated, that we can at last understand the basis of Whitehead's seemingly flippant remark depicting his own work as Kant in reverse. In *Process and Reality*, Whitehead affirms that the philosophy of the organism must begin with a 'critique of pure feeling', an examination of how the interactive microperception of events is to be envisaged as what precedes single attainments or organismic 'satisfactions'; that is, as the transcendental field of the realization of these satisfactions. In this dynamic panpsychism, feeling becomes the 'basic generic operation of passing from the objectivity of data to the subjectivity of the actual entity in question', it operates 'a transition into subjectivity'.<sup>76</sup> The sense of Whitehead's remark about the order of Kant's Critiques is thus clarified. Rather than depending either on a holistic approach to organization or a notion of autonomous closure, Whitehead's figure of a 'concrescence of prehensions' is founded on the idea that individuation is a matter of interactive and assimilative feeling.<sup>77</sup> Prehensions are both

centripetal and centrifugal. As he writes, presenting his relation to Kant from yet another angle:

The philosophy of organism aspires to construct a critique of pure feeling in the philosophical position in which Kant put his *Critique of Pure Reason*. This should also supersede the remaining *Critiques* required in the Kantian philosophy. Thus in the organic philosophy Kant's 'Transcendental Aesthetic' becomes a distorted fragment of what should have been his main topic. The datum includes its own interconnections and the first stage of the process of feeling is the reception into the responsive conformity of feeling whereby the datum, which is mere potentiality, becomes the individualized basis for a complex unity of realization.<sup>78</sup>

The complexity of this unity of realization is based on its subjective – objective character, the fact that it is of the nature of prehension simultaneously to constitute an internal relation and an external relation. In his chapter on Whitehead in *Le Pli*, Deleuze captures this trait very deftly:

The datum, the prehended, is itself a pre-existing or co-existing prehension, so that every prehension is a prehension of prehension, and the event, a 'nexus of prehensions'. Each new prehension becomes a datum, it becomes public, but only for other prehensions objectifying it; the event is inseparably the objectivation of a prehension and the subjectivation of another, it is at once public and private, potential and actual, entering into the becoming of another event and the subject of its own becoming. There is always something psychic in the event.<sup>79</sup>

Yet this psychism is by no means a plea for the transcendent primacy of subjective interiority, and least of all for the autonomy of the percipient. Contra Kant, for whom 'no element in the temporal world could itself be an experient',<sup>80</sup> and with Leibniz and Nietzsche, for whom the individuation of perspectives, of 'percipient events', precedes that of the subjects of apperception, Whitehead's 'great lesson' is that 'there is no prehension that will not be prehended in its turn. I will always be the public of someone who will be private for himself and the public of another.'<sup>81</sup> Each and every event is inextricably double-sided, self-referential and relational. Patterns of events are always stamped with reciprocity and interaction: 'each event corresponds to two such patterns;

namely, the pattern of aspects of other events which it grasps into its own unity, and the pattern of its aspects which other events severally grasp into their unities'.<sup>82</sup> It is essential to understand that this attribution of feeling and perception to the event as the fundamental unit of occurrence constitutes neither a return to psychovitalism nor an attempt to make consciousness into the seat of the world's constitution. Following Deleuze's 1987 seminars on Leibniz and Whitehead, there are ultimately five elements to the theory of concrescence: (1) the *prehending subject*; (2) the preheded *data*; (3) *feeling*, conceived as the manner in which the preheding subject seizes the preheded data, and fills itself with them (also referred to as the 'private element'); (4) *self-enjoyment*, considered as the vital contraction or immediate presentation of the elements wherefrom the processual subject issues (also referred to by Deleuze as ethical 'pleasure' or 'joy' in the events that befall us); (5) *subjective aim*, understood as the 'conformity' of feelings, their participation in a single subjective form which guarantees their endurance, their ability to 'bathe in the past and tend towards the future'.<sup>83</sup> Of course, Whitehead's 'interactionism' means this cannot be envisaged as a sequence of entailments, since these five elements are inextricably bound up in reciprocal implication or immanence. All the same, there appears to be a culmination of the community of concrescence in a quasi-teleological temporality, whereby a certain 'unity of the whole' is attained. At this juncture, however, Deleuze pretty much decrees the cessation of any drift towards the teleological; in a passage that is strongly reminiscent of his account of the first synthesis of time in *Difference and Repetition*, he says the subjective aim is at base: 'A process of contraction, and nothing but ... It is with organs issued from the past, even a very near past, that I grasp the immediately present.'

Whitehead's work bears witness to the connection linking the debates around mechanistic and teleological views of causality to the modalities of individuation privileged by the ontologies of these approaches. Let us deal with individuation first. It is difficult to ignore the sheer prominence of the problem of individuation in Whitehead's thought, at least once we disentangle the apparent oddity of his vocabulary. Consider the following passage:

Creativity is the universal of universals characterizing ultimate matter of fact. It is that ultimate principle by which the many, which are the universe disjunctively, become the one actual occasion, which is the universe conjunctively. It lies in the nature of things that the many enter into complex unity.<sup>84</sup>

In this doctrine of creativity, to force a disjunction between process and individuality, potentiality and actuality, or discreteness and continuity is frowned upon: '[T]he erroneous notions of process devoid of individualities, and of individualities devoid of process, can never be adjusted to each other.'<sup>85</sup> On this basis Whitehead will argue like Peirce (see Chapter 4, Section 4.3) for an evolution of laws, in the understanding that the Darwinian revolution in the modern sciences makes it untenable to posit any immutable, transcendent control over the trajectories of individuation, any principle of individuation that would itself remain immune from change. But, given the joint effect of the theory of feeling and the critique of simple location, together with the maxim that 'each individual fact must be describable as process',<sup>86</sup> how are we to characterize the individualities whence process itself is woven?

In order to sketch a reply we must return to the question of the event and to Whitehead's proposal that it be accorded the status of new primitive in natural philosophy. Deleuze, in *Le Pli* as well as in his 1987 Leibniz seminars at Vincennes, argued for a fundamental kinship between Whitehead and Leibniz (and himself, no doubt), a kinship to be located in the common conviction (the 'mannerist vision of the world') that 'All is event.'<sup>87</sup> Without doubt this interpretation finds ample support in Whitehead's own writings, for instance in the lapidary formula: 'There is time because there are happenings, and apart from happenings there is nothing.'<sup>88</sup> It is on this basis that Deleuze says that 'the event is the support of an infinity of processes, of processes of subjectivation, of processes of individuation, of rationalization. Subjects will be born, rationalities and individualities will take shape, but all of this within events.'<sup>89</sup> In line with his customary approach, inherited from Bergson and perhaps to an even greater extent from Simondon, Deleuze's seminars will approach Whitehead via the 'ontogenetic' question: 'Can we undertake a genesis of the event? How do we arrive at conjunctions?' It is worth noting that this interrogation takes place in open divergence with Isabelle Stengers (a respondent in the seminar discussion) and her contention that, whilst initially concerned with the physico-mathematical genesis of actual occasions, Whitehead's *Process and Reality* signals a turn towards the speculative investigation of the creative functions of deity and finality.

Deleuze is extremely sensitive to the requirements that Whitehead's position, prepared as it is by the latter's unsparing decomposition of the tenets of mechanist materialism, places upon the concept of genesis. Indeed, these are requirements Deleuze himself is more than sympathetic to, since, to a considerable extent, they are those of his own thinking of

individuation. This genesis must be capable of accounting for the fact that the only law to which the actual occasion is subjected requires that it present an innovation over and above its genetic components. This is what Whitehead calls the production of novel togetherness: 'The many become one, and are increased by one.'<sup>90</sup> This increase, which is but the ultimate trait of the processual universe, its 'creative advance', means that 'the actual occasion cannot derive, issue, or result from its genetic components'. A genesis is therefore never causal, since it is 'the genesis of novelty as such'.<sup>91</sup> Grounding his treatment in these 'creative' requirements, Deleuze provides us with a veritable schema for Whiteheadian ontogenesis, which seeks to answer his initial question in the affirmative: yes, we can formulate a genesis of the event.

Once again, Deleuze considers this aspect of Whitehead's thought in terms of five components, now far more marked by a structure of entailment than was the case in his discussion of prehensions. First, we find Whitehead's positing of the Many, of 'the pure state of disjunctive diversity'; second, the organization of infinite limitless series, comprising vibrations at different orders of magnitude; third, the formation of convergent series upon limits; fourth, the reunion of two convergent series in a *conjunction*, or the constitution of an actual occasion upon the conditions provided by the convergence of series. Fifth is the composition of the actual occasion itself. Now, it is at this fifth point that Deleuze, responding to Stengers's worries about determinism, argues that the components of the actual occasion or event are not to be drawn from the logical genesis of its conditions, but rather are constituted by the series of prehensions, such as we outlined above. It is on the basis of this disjunction between the conditions and the components of the actual occasion that Deleuze wants to argue that, rather than a deterministic sequence, what we have here is a relay of activities that react one upon another, so that the actual occasion itself in turn 'conditions' the convergent series, the convergent series the divergent ones, and so on. A vexing question intrudes at this point. Assuming that the alternative does not do too much violence to the reciprocal immanence of Whitehead's several approaches to the problem, which are we to take as representing the culmination of his philosophy of individuation: the theory of crescent prehension or the theory of the genesis of events? Though it would be wanton optimism to think that we can extract the unequivocal lineaments of a response, let us at least consider the problem and do so, once again, with Deleuze as our guide.

Deleuze speaks of a logic of events, but he also speaks of a metaphysics of events. Though his own account of this distinction in the lectures is

slightly ambiguous and made somewhat in passing, we can interpret it as posing that the theory of the serial genesis of events is essentially a static one, providing us with what Deleuze terms the *conditions* of the event. The theory of prehensions would instead provide us with the *components* of events and thus constitute the metaphysical aspect of Whitehead's philosophy. Deleuze appears to be telling us that Whitehead's theory of prehensions, with its account of subjective aim, is the core of his philosophy of individuation. Though this is indeed a remarkably lucid and attractive interpretation, it nevertheless leaves out an element that remains crucial to any understanding of Whitehead's approach to the question of individuation, as well as to his related reversal of Kant: the question of the organism. For, as Whitehead himself notes with regard to Leibniz, it is imperative not to elide the distinction between the event, the organism, and the parts of the organism.<sup>92</sup> Leibniz, he notes, '*did not discriminate the event, as the unit of experience, from the enduring organism as its stabilization into importance, and from the cognitive organism as expressing increased completeness of individualization*'.<sup>93</sup> For Whitehead, therefore, the question of individuation as endurance cannot be simply answered at the level of events. What must be considered, in addition to the event as 'unit of occurrence', is the stabilization of patterns of activity, the emergence, within events, of structures that abide and develop 'for their own sake'. Rather than being concerned with units, which are now recast as events and therefore no longer addressed directly in terms of their permanence, being caught in the passage of nature, individuation as endurance is necessarily a theory of patterns. Within events and out of prehensions, the organism subsists as a pattern through its spatiotemporal trajectory. In this regard, it is by no means to be equated, as in Kant, with a form of organizational closure, or be thought of in contradistinction to the mechanism that governs the unidirectional relations of causality obtaining between particulate units of matter. The organism as pattern is inextricably a unity for itself and for the rest of nature (albeit through the mediation of its own environment); it can neither be simply derived from the primitive components of matter nor does it transcendently anticipate its own becoming. The distinction between internal and external relations, which Kant's autopoietic heirs have so readily exploited, is cleverly recast by Whitehead, for whom a pattern can only endure for itself to the extent that it has relevance for others; that is, to the extent that its environment is relevant for it and vice versa.

Whitehead's philosophy of individuation can thus be considered in terms of three interacting levels, none of which is endowed with overall

priority: a genetic theory of events, a relational theory of prehensions, and a structural theory of organization (or pattern). It should elicit no surprise that Whitehead is adamant about presenting the philosophy of the organism as a suspension of and an alternative to the dichotomy of atomized materialism and intentional teleology. To begin with, the very idea that the evidence of organisms forces an addition to the hegemony of mechanism must immediately be discarded. In vitalism, Whitehead writes, 'the fact of mechanism is accepted – I mean, vitalism based on mechanism – and an additional vital control is introduced to explain the actions of living bodies'.<sup>94</sup> But once the belief in particulate matter subjected to locomotion in an absolute space-time is dropped, the issue is no longer that of supplementing mechanism, but of providing a unified ontogenetic account no longer reliant on presuppositions which Whitehead, on the grounds of his own interpretation of the new physics, regards as outmoded at best, and deeply pernicious at worst. The opposition of autonomous and heteronomous modes of individuation is thus to be treated as a symptom, and its dissolution as one of the highest tasks of speculative reason. The predicament which received both its highest formulation and its regulative suspension in the *Critique of Judgment* is even depicted as the gravest of problems, not just for philosophy, but for humanity as such:

A scientific realism, based on mechanism, is conjoined with an unwavering belief in the world of men and of the higher animals as being composed of self-determining organisms. This radical inconsistency at the basis of modern thought accounts for much that is half-hearted and wavering in our civilization.<sup>95</sup>

Whitehead's most forthright answer to this conundrum comes by way of his doctrine of *organic mechanism*, which can be read as an attempt to produce an ontological and scientific synthesis where Kant had deemed that only a complementarity of merely regulative maxims could simultaneously enable empirical research and pacify the dissent at the heart of reason. In line with relational theory of events and the account of organismic individuation presented above, whereby phenomena are always considered under their two aspects or phases ('public' and 'private'), Whitehead notes that 'an individual entity, whose own life-history is part of some larger, deeper, more complete pattern, is liable to have aspects of that larger pattern reflected in itself as modifications of its own being'.<sup>96</sup> Rather than inscribing any demarcation of domains into nature, be it problematically or 'for us', this contextual differentiation of



material modes of organization and behaviour is perfectly neutral, offering no privilege whatever to the organic:

Thus an electron within a living body is different from an electron outside it, by reason of the plan of the body ... But the principle of modification is perfectly general throughout nature, and represents no property peculiar to living bodies.<sup>97</sup>

As a complement to this solution, formulated in terms of the prehensive context of the actual occasion at hand, Whitehead forwards a second answer to the dispute between mechanism and vitalism, expressed in terms of the theory of aspects, of the public/private distinction that runs through the ontology of process. As he writes:

If we stress the role of the environment, this process is causation. If we stress the role of my immediate pattern of active enjoyment, this process is self-creation. If we stress the role of the conceptual anticipation ... this process is the teleological aim at some ideal in the future. This aim, however, is not really beyond the present process. For the aim at the future is an enjoyment in the present. It thus effectively conditions the immediate self-creation of the new creature.<sup>98</sup>

What in Kant remained at the level of regulative maxims, Whitehead considers as actually constitutive of reality, inasmuch as the reality is 'objectively' subjective – objective. In the end, we are faced with two responses to the problem of individuation at the heart of the Kantian Antinomy of Teleological Judgment, both of which announce an ontological conversion whereby actuality is envisaged in its coming-to-be: the first, from the point of view of the inextricably relational character of individuation, contextualizes the distinction between organic and inorganic, natural purpose and mechanism (the theory of organic mechanism); the second maintains it, but only at the level of the public/private distinction in processes of concrescence (the theory of aspects).

The theory of feeling that subtends the philosophy of organism, allowing it to account for trajectories of individuation of which prehensions are the 'vectors' – thereby combining ultimate creativity, eternal objects, and the obligatory reference to other actual entities<sup>99</sup> – effectively synthesizes two concepts which, as we saw in Chapter 1, remain resolutely juxtaposed in Kant: the event, understood as a spatiotemporal individuation that grounds objectivity in the rule-following procession of nature, and organisms, the problematic autoproductions of the *Critique of Judgment*. The prehensile, vectorial movement from world to subject,

the defining factor in Whitehead's philosophy of the organism, is thus revealed as an internalization, one that nevertheless does not exclude external relations. Whence Whitehead's own preferred name for individuation (*conrescence*) and his apparent refusal of any *principle* of individuation that would extrinsically define a given entity. Instead, Whitehead presents us with the 'principle of process': '*how an actual entity becomes constitutes what that actual entity is*'.<sup>100</sup>

It is worth noting here that Deleuze, taking a somewhat subjectivist bias in his interpretation, equates *self-enjoyment* and *satisfaction*, terms that for Whitehead are quite distinct.<sup>101</sup> Whilst the former is indeed adequately described as 'the way in which the subject fills itself up with itself, attaining a richer and richer private life',<sup>102</sup> 'satisfaction' in Whitehead designates the completion of individuation, when an actual entity achieves objective immortality, setting the stage for relations of exteriority: 'with the attainment of the "satisfaction", the immediacy of final causation is lost, and the occasion passes into its objective immortality, in virtue of which efficient causation is constituted'.<sup>103</sup> For Whitehead, the ultimate character of the real is that of 'creative advance', but the nature of this advance is such that it functions by an infinitely complex and mutable series of relays, relays that nevertheless depend on transient instances of localized teleological action, on the conrescence of prehensions into an actual occasion. The basic significance of such a relay structure, in terms of the guiding theme of our investigation, is that it would allow us to think the processes of individuation without seeking any reason for them other than the one afforded by other processes of individuation.

Conrescent becoming is thus marked, like reality in general, by a double aspect: it is a *datum* for other prehensions-into-conrescence, but also a self-prehension (and the one 'because' of the other). And yet, behind the apparent equanimity of this double aspect approach, it seems that it is the second aspect, the private enjoyment of self-constitution, which Whitehead regards as the key to the problems of creativity and novelty. Even though in becoming-superject every occasion offers itself as the material or datum for further processes of conrescence or individuation, and admitting that genesis remains an Ultimate behind which there lies no other explanatory principle,<sup>104</sup> it is teleological interiority that in the last instance provides us with the motor of ontogenesis, of conrescence as the 'production of novel togetherness'.<sup>105</sup> Between data and issue, between the occasion and the product of the process of conrescence or individuation lies 'the essence

of existence', 'the process of self-determination':

We must not conceive of a dead datum with a passive form. The datum is imposing itself upon this process, conditioning its forms. We must not dwell mainly on the issue. The immediacy of existence is then past and over. The vividness of life lies in the transition, with its forms aiming at the issue. Actuality in its essence is aim at self-formation.<sup>106</sup>

We can now begin to see why Deleuze, attempting to establish a kinship between Whitehead and Leibniz, writes in *Le Pli* of a 'teleological conversion of philosophy'.<sup>107</sup> How are we to understand such a conversion, especially in light of our treatment of Whitehead's constructive displacement of the Kantian antinomy of organization? The answer lies, yet again, in the place allotted to the concept of individuation. Whitehead's philosophy is after all best summarized as a relentless pursuit of novelty, of that One which, whilst arising from the Many, is not a mere consequence but a real addition. As Rorty writes:

only because actual entities sustain internal relations to goals – their 'subjective aims' – are they capable of sustaining external relations to other actual entities. What prevents an actual entity from being reduced to the sum of its physical prehensions of other actual entities ... is the individuality and unrepeatability of its subjective aim.<sup>108</sup>

Deleuze's own attempt at formalizing the question of genesis in Whitehead seems to arrive at similar conclusions. If the theory of the components of prehension is the basis for a metaphysics of individuation, then, despite Deleuze's defence of a purely 'contractile' notion of individuation, the teleology of subjective aim stands revealed as the crucial motor of Whitehead's metaphysics, the reason for ontogenesis. We are not allowed to tarry with an account of becoming that stresses the relational and interactive character of concrescent individuation. If 'life', and life *as* individuation, is to be accounted for, then, Whitehead argues, we must turn to something more than the 'creative advance' of becoming, we must postulate – albeit in terms of an immanent teleology – the decisional, selective activity of aim:

By this term *aim at self-formation* is meant the exclusion of the boundless wealth of alternative potentiality, and the inclusion of that definite factor of novelty which constitutes the selected way of entertaining

those data in the process of unification. The aim is that complex of feeling which is the enjoyment of those data in that way. 'That way of enjoyment' is selected from the boundless wealth of alternatives. It has been aimed at for actualization in the process.<sup>109</sup>

Insofar as it moves beyond a relational theory of individuation, Whitehead's doctrine issues into a teleology (subjective aim: something must *drive* and *polarize* processes of genesis and composition) and a Platonic 'formalism' (theory of eternal objects: general rules and mathematical relations must exist which are impassive to process, exempt from the travails of generation).<sup>110</sup>

To return to the question that instigated this foray into the philosophy of the organism, what are we to make of Whitehead's relation to Kant? To begin with, we could enumerate the points of doctrine that militate in favour of taking Whitehead at his word when he considers the philosophy of the organism to be an inversion of the fundamental tenets of Kantianism. First, an outright refusal to consider the Newtonian parameters of Kant's understanding of causality and mechanism as in any sense binding, either for science or for experience (critique of the fallacy of simple location).<sup>111</sup> Second, the view of the subject as the *result* of a process of concrescence, of a synthesis of prehensions that actively modulate its individuality (theory of feeling). Third, the dismissal of the distinction between autonomy and allonomy – what we have loosely referred to as Kant's antinomy of organization – and the contextualization of the in/organic difference (theory of organic mechanism). So, with the refusal of a mechanist model of spatiotemporal individuation, of the transcendental autonomy of the subject and of the very distinction between causal structures that underlay the 'Antinomy of Teleological Judgment', what remains of the Kantian problematic? Arguably, quite a lot. On the joint basis of the new physics and of his own speculative desiderata, Whitehead has brought together (whether by design or not, is irrelevant here) Kant's accounts of the 'feeling of life' and of the internal relations of self-organized beings, and turned the self-enjoyment of the active unit of organization (the actual occasion or organism) into the key to the creative advance of the universe, an advance which, in order not to sink into the inanity Whitehead encapsulates in the phrase 'the nonentity of indefiniteness',<sup>112</sup> must be an advance in and by individuations. This means that Kant's ether, as a transcendental, preindividual material of individuation is transformed into an 'ether of events', understood in terms of the 'shifting facts of the fields of force';<sup>113</sup> if by individuality we understand the sort of

spatiotemporal individuation that is arguably continuous with the abstractions we make from sense perception, then this concept of the ether means that ‘our ordinary notions of matter are derived from observations of certain average results which cloak the real nature of [its] activities’. Furthermore, ‘the group of agitations which we term matter is fused into the environment. There is no possibility of a detached, self-contained existence. The environment enters into the nature of each thing. Some elements in the nature of a complete set of agitations may remain stable as those agitations are propelled through a changing environment. But such stability is only the case in a general, average way.’<sup>114</sup> That being said, in order to explicate the endurances within this general change, Whitehead is led to raise a certain variety of teleology – albeit an essentially relational and provisional one – to the constitutive standing of motor of creative advance, the inner life of things, which abstraction alone forces us to consider mechanistically. In this section we have tried to track the variety of resonances and responses that lie behind the idea of the philosophy of the organism as a reversal of Kant. As we have seen, in considering this confrontation with Kant via Whitehead’s treatment of the problem of individuation, it is possible to discern in the latter’s work two tendencies, deeply entangled throughout his speculative writings. On the one hand, we find an attempt, founded on an unsparing critique of the Newtonian foundations of Kant’s epistemology and philosophy of nature, to undermine the hegemony of the principle of individuation and to provide, in the theory of organic mechanism, a way out of the Kantian antinomy. On the other, we encounter, in the guise of subjective aim, a return of teleology once again considered as an engine of natural organization, a return which ultimately binds the organism to an eidetic principle, albeit one no longer considered as merely transcendent or problematic, but as the concrete fact of the experience of enjoyment.

#### **2.4 Remark on self-organization and transcendental philosophy**

In this chapter I have sought to track three separate lines of thought responding to the challenges posed by the thematization of the problem of individuation in terms of the dichotomy between autonomous and heteronomous modes of individuation, as inherited from Kant’s *Critique of Judgment*. Throughout I have placed the accent on the distinction between two paths towards another solution, as it were, of the Antinomy of Teleological Judgment, a solution that would accept the challenge of

the ontological conversion whilst not falling into the dogmatic affirmation of either pole of the Antinomy. As I have adumbrated, the stipulation of the antinomy is predicated upon a very specific ontological pre-understanding of individuation, organization and causality, which finds itself caught between the redoubtable rigidity of mechanism and the mysteries of material intentionality precisely because of its incapacity to think the operations of individuation without the inaugural presupposition that these operations may be captured by a point-like idea or principle. Either as object of intuition or as immaterial principle, the modality of individuation at either pole of the Antinomy shows itself to be drastically overdetermined by a cognitive problematic; in short, by a philosophy of representation. It is interesting to note that of the three descendants of the Antinomy considered in this chapter the least promising, the theory of autopoiesis, merely reaffirms the initial, Kantian terms of the debate, assuming that a machinic transposition – which, as noted, was already present in Kant's own concept of natural machines – could escape the fetters of critique, and provide a novel ground for thinking organization. Alas, as the application of Simondon's criteria showed, autopoiesis fails to fulfil its theoretical promise. This is not only because of a deficit of ontological critique, but also because it fails to consider the transcendental character of Kant's own argument.

To effect an ontological conversion of Kant's problematic is not simply to forsake the domain of transcendental inquiry for the sake of either scientific ontology or modelization. Quite the contrary, it entails demonstrating that Kant's account, in its attempt to forestall the incursions of hylozoist, fatalist or stochastic hypothesis into the autonomous terrain of reason and of noumenal morality, ends up taking for granted – by way of a surreptitious dogmatism – precisely those modalities of individuation that subtend its encounter with the natural sciences and elicit the regulative resolution of the anomaly of the organic. Now, Kant himself, in the notebooks for a 'Transition from the Metaphysical Principles of Natural Science to Physics', demonstrates that, if nothing else, the problems highlighted by the Antinomy of Teleological Judgment may become the spur for a further determination of the transcendental. Two directions are sketched out by Kant to face this challenge. The first involves the theory of the ether, the deduction of a unified preindividual matter as the basis for the unity of experience. The second is concerned with providing a foundation in 'psycho-motive self-consciousness'<sup>115</sup> or 'autoposition',<sup>116</sup> which would see the subject's experience of itself as motive system, that is, *the experience of itself qua organism*, as announcing the dissolution of the paradoxical status of self-organization which I outlined in Chapter 1.

Though I have no wish to dispute the doctrinal solidarity between these two aspects of Kant's projected transition, I would like to argue that, *from the point of view of the questions of individuation and self-organization*, they provide us with independent paths towards a reconfiguration of the relationship between transcendental philosophy and the ontology of individuation.<sup>117</sup> In the ether proofs we encounter a sort of transcendental materialism for which the in/organic difference becomes a difference of degree, a problem that instead of being relegated to a regulative and ultimately practical status is now caught up *within* a general theory of individuation based on the postulate, both transcendental *and* ontological, of a material continuum. This relativization of the status of the organic, which sits uneasily with Kant's own regulative thematization of an immaterial principle of life, is also arguably at odds with the approach by way of self-affection, in which Kant sketches out a transcendental phenomenology of embodied consciousness. Mathieu has perhaps best stated the import of this direction in the *Opus Postumum* in his discussion of the 'The body as knowing subject':

The fact that the knowing subject is inscribed in the world by way of the organic body, however configured, bears such significance in this part of the work that Hübner has gone to the extent of speaking of a '*Deduktion des Leibes*'. The *Critique of Pure Reason* was written for a finite mind, which therefore did not need to be thought as installed in an organism; the transition to physics, on the contrary, cannot disregard this material instrument of the subject, because the (mechanical) movements of material masses of which physical phenomena consist, act above all on the body of the subject: and this action must be connected, somehow, with that (dynamic) plane of relations between motive forces of which the matter of the ether, the basis of every movement, consists. The transition to physics lies in the conjunction of such a plane of thought with the plane of physicality. Now, in the knowing subject, what connects thought with its physical materiality is, precisely, the *organicity* of the body. Organicity means, on the one hand, reciprocal conditioning of the parts and the whole and therefore *unity*, on the other, empirical physicality, because the parts of the organism are physical objects.<sup>118</sup>

It should be quite obvious that the nature of this solution involves a path of thinking which, whilst it may in the final analysis turn out to complement a transcendental materialism that seeks to construct an

account of individuation out of a preindividual being, is nevertheless sharply distinguished from it. Assuming, as we have, that this recasting of transcendental philosophy finds its primary impetus in the anomaly defined by the paradoxical status of self-organized beings *qua* objects of experience, we should nevertheless note the presence, still within the confines of the problematic opened by the third Critique, of a third option, as it were, that of an extension of the domain of reflective judgment. In this perspective, the problem of self-organization is seen to lead reason towards a suspension of its determining capacities and their link to the mechanistic concept of causality, and to a generalization of its reflective and regulative character, whether this be understood in terms of a theory of fictions (Vaihinger), a conventionalism (Poincaré), or a poietic, phenomenological ontology of the preindividual (Garelli).<sup>119</sup> Yet, to the extent that this loose family of positions does not effect a veritable transformation to the Kantian problematic, but merely chooses to advocate the hypertrophy of one pole of the teleological antinomy, it both remains vulnerable to the arguments of critique against indifference and seems altogether to skirt both the intrasystemic gravity and the revolutionary character of the introduction of the 'stranger' of self-organization into the Critical philosophy and its foundation of legitimate representations. In the final analysis, this 'regulativism' seems to share the subjective emphasis of the phenomenology of embodiment but in such a way as to evacuate it of all but a merely pragmatic or poietic substance. It thus appears that, if the question of self-organization is to be addressed in terms of its genesis (both in the domain of matter and in terms of our cognitive or experimental capacities) the path of transcendental materialism, such as its bare outlines can be extracted from Kant's theory of the ether, proves to be the most promising avenue.

In its attention to the negotiations between supposedly physical and organic modes of individuation, in its speculations regarding the function of feeling for organization, and, most of all, in its thoroughgoing critique of the fallacies at the heart of the mechanist conception of spatiotemporal individuation, the work of Whitehead promised an approach to this ontogenetic transformation of the transcendental worthy of the complexity of the problems outlined by Kant, both in the *Critique of Judgment* and in the *Opus Postumum*. Indeed, as we have suggested, Whitehead's unrelenting and variegated reflection on the relationship between feeling, matter and organization, has provided us with a wealth of insights regarding both the specific limits of the natural-philosophical paradigm within which Kant operated and with a dense network of



concepts to think processes of individuation without subjecting them to the prejudices of common sense and its scientific sublimations. This is all the more significant to the extent that Whitehead proposed, at different junctures in his thought: (1) to reverse the critiques; (2) to invert the philosophy of the subject into a philosophy of the organism; and (3) to prolong the speculative intuitions behind the material theory of the ether into the construction of an ether of events. And yet, by assigning the function of creativity-in-the-last-instance to a teleological interiority, and basing the subjective aim governing the process of concrescence on the ingression of eternal objects themselves immune from genesis, Whitehead does not fully succeed in responding to the demand posed by Simondon as well as Deleuze: to provide a non-creationist and non-theistic account of ontogenesis, such that the preindividual is itself singularized and not simply considered in the metaphysical guise of a pure activity, and, moreover, such that accounting for the limitation of beings does not entail the postulate of a divine lure. Without the constitution of such an immanent ontology of individuation, the becoming and limitation of beings seems, almost ineluctably, to lead to a search for supplementary principles of individuation to quell the vertigo of infinite regress. In Whitehead's case, rather than the analogical and regulative theistic principle of teleological individuation we encountered in Kant, we are offered God as a 'principle of concretion – the principle whereby there is initiated a definite outcome from a situation otherwise riddled with ambiguity.'<sup>120</sup> Once again, and this might be the staple of 'creationism in philosophy',<sup>121</sup> the inquiry about individuation issues into a constitutive affinity between the self-organization of the organic, understood in terms of its immanent aim, and a divine instance or instigator of production. Or, between God as 'the eternal urge of desire'<sup>122</sup> and subjective aim as 'the affect of a pure self-Becoming, of a becoming oneself' (*l'affect d'un pur Devenir de soi, d'un devenir soi-même*), which Deleuze, unwittingly echoing the *Opus Postumum*, speaks of in the seminars.<sup>123</sup> Whilst hardly wishing to jettison the numerous and frequently arresting contributions made by Whitehead to the philosophical vocabulary of a post-Kantian philosophy of individuation, it thus seems that a more thoroughgoing critique of the Kantian framework is necessary if the philosophy of individuation is really to effect a shift in the matrix originating in the *Critique of Judgment*, so as to work through both the 'ontological conversion' and the concomitant transformation of the transcendental. It is thus that we turn to Nietzsche's early notebooks on Kant and to their often brutal, if not downright 'vulgar' attack on what they call 'Kant's Concept of the Organic'. Through Nietzsche

we hope to force the Kantian paradigm in the philosophy of individuation to undergo something like a traversal of nihilism, such that the organico-theological coupling that subtends the teleologies of organization both in the Critical philosophy<sup>124</sup> and in Whitehead can be undone, and the problem reconstituted so as to keep the lure of *Genesis* at bay from ontogenesis, the spectacle of creation at a remove from the theatre of production. In Part II, which is made possible by our passage through Nietzsche's reductions of the organic, much that is vital in the Whiteheadian approach will be revitalized, in particular the concepts of: concrescence (through Peirce's notion of habit), interaction (through Simondon's relational ontology) and eventality (through Deleuze's differential ontology). As for Kant, our entire inquiry will remain in a certain sense under the aegis of the transcendental, albeit a transcendental whose ontological conversion, culminating in our treatment of Deleuze, will entail its novel status as a domain of experience: not cognitive experience, in what would be a rather feeble subreption of the critical apparatus, but the experience of construction, conceived as the individuating factor for the very practice of philosophy. The following formulation, from Geoff Bennington's discussion of the Antinomy of Teleological Judgment, can thus serve, in its extreme fidelity to the Kantian spirit, as a useful contrast for our own approach:

We can thus preserve the naturalness of nature [and not merely escape into transcendence] only by invoking in merely problematic fashion a concept the (positive or negative) objectivity of which will never be established. Nature *is wanting* this strange concept of a nature other than properly material nature, this phantom nature of which we will never know anything other than that we need it. This structure is none other than that of transcendentalism itself.<sup>125</sup>

We too will be concerned with investigating, in terms of what we have already referred to as the 'ontology of anomalous individuation', the structure of transcendentalism, but in such a way that this 'other' nature will not be sought out for its capacity to preserve a naturalness whose correlate is subjective autonomy. Rather, in our investigation of the conceptual configurations put forward by Peirce, Simondon and Deleuze, as well as of the philosophical solidarity that binds their efforts together, we will encounter a level of ontological inquiry which, instead of securing the 'objectivity' of nature, is concerned precisely with a type of productivity that determines objectivity as derivative of

subrepresentational and asubjective operations. These operations are neither phantasms nor objects, but require, in order to be philosophically seized, a transformation in the founding parameters of speculative reason. First, however, let us turn to the Nietzschean declaration of the crisis of the Kantian approach to the organic, accompanied as it is by its own singular notion of method: the method of nature.

# 3

## The Method of Nature, the Crisis of Critique: Life, Multiplicity and the Genesis of the Intellect in Nietzsche's Early Notebooks

This is the real problem of philosophy, the unending purposiveness of organisms and the unconsciousness in their coming to be.

*On the Origins of Language*

Everywhere, and even in the history of materialism, the principle holds that the straight path is not always the shortest.

*Notes for an Essay on Democritus*

### 3.1 April 1868

In the midst of a period of convalescence following upon a riding accident during his military service in Naumburg, the 23-year-old Nietzsche embarks on the project for an academic dissertation to be entitled 'The Concept of the Organic since Kant'.<sup>1</sup> By May of the same year, the project is abandoned, giving way to a period of sustained inquiry into the field of philology, centring around the original sources of Diogenes Laertius and the relationship between philology and Homer.<sup>2</sup> We could comfortably assume that nothing really happened, that the young Nietzsche, armed with a vague intuition regarding a hotly contested region of post-Kantian philosophy and scientific speculation, merely threw together a collage of quotes and speculative clichés, unable to attain anything like the groundwork of a thesis, or even to sketch out a genuine problem.<sup>3</sup> Needless to say, the very possibility of such an initial impression means that any reading claiming a higher status for the

admittedly fragmentary insights collected in these early notebooks must somehow persuade us of its legitimacy. There are three interpretative decisions that could be called upon to articulate such a claim: (1) *Doctrinal significance*: The notebooks foreshadow Nietzsche's later engagement with the natural sciences, namely with the questions of teleology and individuation; (2) *Conjunctural relevance*: The notebooks are symptoms of a contemporary engagement with the biophilosophical question of teleology;<sup>4</sup> (3) *Conceptual innovation*: The notebooks present a singular concatenation of three conceptual elements into a veritable philosophical problem. These elements are *materialism*, *individuation* and *teleology*, and the problem can be initially transposed into the general question: *What defines a materialist (i.e. non-anthropocentric and non-representational) approach to individuation capable of accounting for the evidence of teleology?* Certainly, the philosophical stance indicated by such a question comes under Lange's heading of a 'Materialism after Kant', but it could receive a further series of names: critical materialism, materialist critique, transcendental materialism.

In what follows, my approach will consist of a hybrid of the first and third of these options. The nature of the notebooks is such that, with regard to the sciences of the day, they are almost entirely mediated by Lange's own wide-ranging survey, so that unlike Nietzsche's later independent forays into the natural and particularly the biological sciences, they afford little in the way of an original critical insight into the actual transformations undertaken by the concepts of individual and purpose in the second half of the nineteenth century.<sup>5</sup> What the notebooks do register in a striking manner is the combined effect of two veritable events in Nietzsche's intellectual biography, two books whose ideas, in quite heterogeneous ways, will pervade his work, both critically and affirmatively, to the very end: Schopenhauer's *The World as Will and Representation* and Lange's *History of Materialism*. With regard to the former, the narrative of the disciple's tortured sloughing off of his educator's influence is more than well trodden by now. Beginning with Nietzsche's ultimately doomed attempt in the *Birth of Tragedy* at transforming the Schopenhauerian framework into the basis of a philosophy of a tragic affirmation, and punctuated by the later reflections and self-criticism bearing on his relation to the great pessimist, this is almost invariably a linear narrative. Yet the unfinished draft of an essay to be entitled 'On Schopenhauer', which immediately precedes Nietzsche's 1868 notes on Kant and teleology, is enough to problematize this received stance, betraying Nietzsche's later claim that he had never found any paradoxes in the great man's work, only minor errors.<sup>6</sup> Indeed, there is

something striking in registering the extent to which the reasons for the eventual divorce with Schopenhauer's metaphysics are contained *in nuce* in these very early reflections. Of course, these are reasons that will only truly emerge once questions regarding the being of becoming and individuation become altogether more decisive for Nietzsche, overriding Schopenhauer's inaugural role as exemplar. For several years, these embryonic but nonetheless authoritative reflections on the philosophy of the will were fated to lie fallow, deferred by the focus on the philosophical life and on the dramatic nature of philosophy as an affirmative art.

Within the bounds of Anglophone scholarship, there has been considerably less recognition of Lange's comparable effect on the changing physiognomy of Nietzsche's work.<sup>7</sup> The relative dearth in Nietzsche of explicit references to this neo-Kantian figure, together with the very different character of the influence he exerted, when compared to Schopenhauer, go some way to explaining this fact. Indeed, it is only in terms of a comprehensive view of Nietzsche's work, one aimed at the more strictly ontological and epistemological theses put forward therein, that we can acknowledge the longer-term 'subterranean' effects of Lange's compendium on Nietzsche's conceptualizations of matter, force, evolution and critique. Even after Nietzsche put considerable distance between himself and Lange's materio-idealism (a position that combines a psychologistic approach to the transcendental with an agnosticism *vis-à-vis* the thing-in-itself), traces of *The History of Materialism* could still be identified in Nietzsche's relation to authors and problematics he first encountered, thanks to Lange's book, in 1866.

It is thus in the unstable and tentative intersection of these two names and these two books, that Nietzsche's early notebooks for the unwritten dissertation 'The Concept of the Organic since Kant' deploy themselves, exploring Schopenhauer's paradoxes in the spirit of Lange's heterodox Kantianism and testing the limits of Lange by trying to determine an interiority to individuation (Life) that would nevertheless not succumb to the dumb sterility of the Schopenhauerian preindividual ( $x = x$ ). Inasmuch as the notebooks are dominated by the influence of these two *traitors* of critique, it is not surprising that they should be dismissed for casting irrelevant aspersions upon Kant – even or especially when they are engaged in trying to assess the contemporary import of the latter's account of teleology and individuation. It can hardly be disputed that Nietzsche's knowledge of Kant at this point in time was scanty and derivative. Lange, Schopenhauer and Kuno Fischer (from whose book most of the quotations and misquotations of the third Critique stem) provided Nietzsche's principal sources, and the *Critique of Judgment*

remained, with the abrupt cessation of the project, one of the books in the list headed 'Read the Following' (along with Schelling's *Ideas for a Philosophy of Nature* and many of the key texts of nineteenth-century German biophilosophy). Imprudent as it may be, we would counter that Nietzsche's hasty and 'opportunistic' scholarship is accompanied here, as is so often the case with him, by a singular insight into the philosophical nerve-centre of his age.

Read in light of the encounter with Lange and Schopenhauer, the choice of the *organic* as the object of his dissertation is by no means arbitrary. Rather, it identifies the point at which the limits of *both* materialism and critique make themselves most acutely felt, in the upsurge of the question of individuation as a fundamental challenge to any philosophy that would consider the fate of 'Materialism after Kant'. Whilst this peculiar episode in Nietzsche's formative period may afford little purchase on the subtler aspects of Kant's suspension of the problem of teleology in the Antinomy (that exemplary instance of transcendental diplomacy) it does exhibit, namely in its treatment of the organic, an interrogation of the grounds of individuation that points to the teeming ontological underside of that anomaly which Kant's work had arguably been the first to register. It is this underside that Nietzsche will then thematize in terms of the infinite multiplicity of life. Nietzsche's precocious contribution supports the claim that with respect to both critique and materialism it is the problem of individuation conceived in its specifically Kantian guise that discloses philosophy's speculative limitations. If individuation is such an impasse within the Kantian framework, then much of Nietzsche's effort, beginning with these notebooks, can be read in terms of a transvaluation of these two great orientations of philosophical modernity (materialism and critique) towards an experimental ontology that would escape from the clutches of the *principium individuationis*. And thus, above all, from the sterility of the paradoxes of the will.

### 3.2 $X = X$

Schopenhauer wanted to find an equation for the  $x$ : and it revealed itself out of his calculation that it =  $x$ .

*On Schopenhauer*

From Schopenhauer's appropriation of Kant, Nietzsche inherits the short-circuit which, bypassing the subtleties of Kant's accounts of the representation and causation of 'nature' (in the various senses thereof),

identifies *objectification* with *individuation*.<sup>8</sup> The consequences of this move should not be downplayed. To begin with, it entails generalizing and thereby displacing critique's original concern with the constitution of the objects of cognition and knowledge, in order to cover the matter of both possible and 'impossible' experience. By the latter, in agreement with Mathieu's interpretation (see Chapter 1), I wish to designate the *problem of the organic*: the point of disjunction, in Kant, between the object or the *individuated*, on the one hand, and the self-organizing and therefore 'chimerical'<sup>9</sup> *individual*, on the other. As the very title of Schopenhauer's great work indicates, this short-circuit exasperates a dichotomy that Kant had negotiated with the greatest care into a properly tragic confrontation between the phantasmatic hegemony of *Vorstellung* and the foreclosed univocity of *Wille*. This dyad elides the complex intrasystemic articulations of the plural strata of critique, thereby introducing a philosophy in which representation is built, in an essentially seamless manner, upon the sole foundation of the spatiotemporal *principium individuationis*. In Schopenhauer, a unilateral expression is postulated, moving from will to representation, with ideas conceived as the degrees of the objectification of the will *in* representation. The problematic difference in kind between modalities of organization – which had served both to outline and forestall the explosion of the problem of individuation as production or ontogenesis in the *Critique of Judgment* – is thereby suspended, making the *organic* into just another link (albeit a 'high' one) in the chain of Ideas that begins with the *principium individuationis* and passes through the other 'degrees of visibility that belong to the objectification of the Will, to the reflection of its inner nature'.<sup>10</sup> So configured, representation is both homogeneous and hegemonic, never encountering *within phenomenal experience* anything that would problematize its sovereignty over it.

Two further consequences result from Schopenhauer's equation of individuation with the spatiotemporal representation of the objects of experience. First, a momentous line is drawn between individuality and individuation. As Nuno Nabais remarks, in one of the few substantial treatments of the question of individuation in Nietzsche: 'The essential incommunicability between *individuality* [*Individualität*] and *individuation* [*Individuation*] constitutes one of the central paradoxes of Schopenhauerian metaphysics and the one that posed the greatest difficulties to the autonomous development of the Nietzschean theory of the individual.'<sup>11</sup> Second, a parallel distinction is presented between two types of unity: the *unity of a multiplicity* and *unity without multiplicity*; or, Representation as the objectal exteriority and dissemination of the



individuated and Will as the consummate interiority of a non-phenomenal One. This stance is encapsulated in the following passage, which displays several amongst the paradoxes that Nietzsche's early notes on Schopenhauer will endeavour to identify and dispose of, while also providing an exemplary formulation of the representational capture of individuation and its 'tragic' separation from individuality:

The *will* as thing-in-itself is quite different from its phenomenon, and is entirely free from all the forms of the phenomenon into which it first passes when it appears, and which therefore concern only its *objectivity*, and are foreign to the will itself ... I shall call time and space the *principium individuationis*, an expression borrowed from the old scholasticism, and I beg the reader to bear this in mind once and for all. For it is only by means of time and space that something which is one and the same according to its nature and the concept appears as different, as a multiplicity of co-existent and successive things ... It is apparent from what has been said that the will as thing-in-itself lies outside the province of the principle of sufficient reason in all its forms, and is consequently completely groundless, although each of its phenomena is entirely subject to that principle. Further, it is free from all *multiplicity*, although its phenomena in time and space are innumerable. It is itself one, yet not as an object is one, for the unity of an object is known only in contrast to possible multiplicity. Again, the will is one not as a concept is one, for a concept originates only through abstraction from multiplicity; but it is one as that which lies outside time and space, outside the *principium individuationis*, that is to say, outside the possibility of multiplicity.<sup>12</sup>

Though a number of Nietzsche's objections will be familiar to those acquainted with the critical reception of (or prejudice against) Schopenhauer, they are rendered unique by the way in which Nietzsche is effectively caught between two distinct reactions. The first sees in Schopenhauer's 'discovery' of the will and its subreption of Kantian limit a fundamental starting point for any philosophy that would at last go against the Socratic and Christian grain, wedding thought to art in tragic affirmation: the concept becomes poetic and the task of affirmation is dramatized in the struggle between the world's two principles or tendencies, Will and Representation, Dionysus and Apollo. The second reaction, though sympathetic towards the interrogation of the inner life of the phenomenon, is ultimately cognizant of the severe limitations that the maintenance of Kantian parameters places upon Schopenhauer's

thought. It thus argues that the relationship between the domain of the preindividual and that of the individuated-in-representation is insufficiently determined by the terms of the dichotomy between the One Will and the multiplicity of its spatiotemporal objectifications. Moreover, it insists that the introspective immediacy that reveals the presence of this One *in us* is the most precarious of evidences. In the notebooks, it is the second approach that takes precedence, amply corroborating the view, put forward by James Porter, among others, whereby Nietzsche's later fidelity to Schopenhauer as the originator of a dramatic mode in philosophy and culture took place *despite* Nietzsche's almost immediate realization of the aporias of the philosophy of the will.

Nietzsche does affirm that the speculative site marked out by the notion of 'Will', understood as a radical subreption of the critical proscriptions placed upon the noumenal, is of singular philosophical import. This does not preclude the acknowledgment of its shortcomings when it comes to the art of philosophical nomination: 'It is a clumsily coined, very encompassing word, when with it such an important thought, going well beyond Kant, is to be labelled differently' (227). Of course, much of Nietzsche's mature philosophy can be fruitfully considered as an effort at just such a different labelling.<sup>13</sup> What then are the objections against this particular name and its repercussions? Nietzsche suggests four: (1) the will is a hidden category; (2) the will can only be grasped through a 'poetic intuition' (228), yet never demonstrated; (3) the predicates of the will are mere by-products of its radical opposition to representation; (4) the will presumes the identification of 'the borders of individuation'. This last objection recapitulates the other three and serves for Nietzsche as the key to exposing the severe shortcomings of the philosophy of the Will. As he writes:

Whether this world is will? – Here is the point at which we must make our fourth attack. The Schopenhauerian warp and weft gets tangled in his hands: in the smallest part as a result of a certain tactical clumsiness of its author, but mostly because the world does not let itself be so easily fastened into the system as Schopenhauer had hoped in the first inspiration of his discovery. In his old age he complained that *the most difficult problem of philosophy* had not been solved in his own. He meant *the question concerning the borders of individuation*. (229 – my emphasis)

What does Nietzsche mean by 'borders of individuation'? Our attention is being directed towards an essential aspect of Schopenhauer's doctrine,

the *circumscription or delimitation of the domain of representation*. Identified as the unilaterally expressive ground of phenomenal objectivity, the positing of will functions to assign the definite domain upon which representation legislates, through the *principium individuationis* and the *degrees of objectification* that are constructed upon it. This domain is both everything *and* nothing. It includes the totality of possible experience (what can be represented and known *as* an object *for* a subject) and is, at the same time, radically *inessential*. This aporetic disjunction turns the will, the interiority of being, into a completely phantasmatic entity that can only be attained through a kind of negative or apophatic ontology, the extraction of the properties of the will from the mere negation of the predicates of representation. In Nietzsche's colourful image, this leads to 'a species of extremely important and hardly avoidable contradictions, which to a certain extent while still resting under their mother's heart arm themselves and, scarcely born, do their first deed by killing her. They concern themselves collectively with the borders of individuation and have their *πρωτον ψ(ευδος)*' (229) in the derivative character of the predicates of will.

In Nietzsche's view Schopenhauer only succeeds, with 'dictatorial tone', in making it so that 'a completely dark and ungraspable *x* is draped with predicates'(230). This constant *tracing* of the will from the predicates of representation has two effects: the 'transcendental evaporates'(230) and the origin of the intellect is shrouded in mystery. First, the very predicate of unity, or *unity without multiplicity*, is borrowed, by way of a phantasmatic subtraction of multiplicity itself, from the *principium individuationis*. What the groundless, transcendental will is intended to ground and delimit turns out, on closer attention, to be its very source. The supposed transcendental is itself conditioned or traced, 'it is continually required to borrow from the world of appearance' (230). Second, no account can be given of the genesis of the intellect, inasmuch as it precedes or presupposes itself at every step of the way. Since 'even before the appearance of the will we see the *principium individuationis* in full effect' (231) and the world of appearance *is nothing but* the system of representation, we are forced into an unacceptable dilemma. In Nietzsche's words, either 'the intellect must rest as a new predicate conjoined with the thing in itself' or 'there can be no intellect because at no time could an intellect have become' (232). If we accept the first formula, the entire Schopenhauerian construction crumbles under the weight of its absurd consequence: Will = Representation. If we opt for the second, Parmenidean solution, every parameter of intelligibility vanishes: everything is Will, which is to say, One. Focusing on the

'borders of individuation', on 'the dark contradictoriness in the region where individuality ceases to be' (226), Nietzsche comes to realize that *the Schopenhauerian Will is unable to both delimit and generate the individuated, so that it collapses into a negative ontology traced from the domain of representation*. The disjunction between the preindividual instance of living interiority and the individuated domain of representation obliterates the question of individuation or ontogenesis itself: 'the transcendental evaporates' (230).

In *The Birth of Tragedy*, Nietzsche will transfigure the World, conceived as the contradiction between the One and the *principium individuationis* (the selfsame contradiction whose essential instability he persuasively demonstrated in the 1868 notebooks), into the terrain for a dramatic transfiguration of existence into the creative *agon* of Apollo and Dionysus. In the wake of his own dissatisfaction with such a project of tragic and affirmative dramatization, three interlaced questions initially sketched in these very early notes on Schopenhauer will accompany Nietzsche throughout his later experiments in rhetoric and ontology: *The question of critique*: Can representation be delimited, 'bordered', and, if so by what? *The question of production*: Can we identify a preindividual, non-representational domain that would be capable of accounting for emergence of its individuated representation? *The question of asymmetry*: Is there an interiority, an inner life of the will (or of plural wills), 'behind' the mere exteriority of representation?<sup>14</sup>

All of these questions concern the relations obtaining between the transcendental, the processes of individuation, and the status of representation. They command two general tendencies within Nietzsche's thought. The first responds to the impasses of the philosophy of the will by declaring a *closure of representation*. Whilst not necessarily denying the existence of a preindividual realm, it professes agnosticism with respect to its ontological composition. Given that delimiting the realm of representation requires some sort of outside, an other-than-representation, this closure does not possess genuine transcendental status. It ultimately results, following Lange, in the claim that the dominance of representation and its *principium individuationis* over our action and cognition is a simply a function of our organization, at once relative (only *our* experience is at stake, other beings could cognize otherwise) and ineluctable (though the limits of our psychology and physiology are contingent, they constitute the enduring framework of our experience). The second tendency affirms instead Schopenhauer's infringement of the Kantian proscription for the sake of an insight into *non-representational interiority*. This interiority is defined by its capacity to account for the

origin of the intellect as a representing mechanism without resorting to the apophatic strategy. The asymmetry demanded by such an account of course cannot be that of two *worlds*. Whilst it is true that Nietzsche will only realize much later that the phenomenal realm of appearances vanishes *as a separate realm* with the destitution of transcendent essence, this second tendency within Nietzsche's response to the Schopenhauerian paradoxes already blurs the confines of the territory of representation which the Critical philosophy had earlier sought to define. One of the preliminary conditions for neutralizing the binding force of the Schopenhauerian dilemma is precisely *the relativization of representation*. By refusing it both completeness and closure, Nietzsche's thought reopens the question of the origin of representation and of the representational mechanisms that seem to govern 'our' constitution. The boundaries of individuation are rendered porous, as the representational *principium individuationis* is demoted to the status of a physiological constant and the problem turns into that of the *constitution*, and not the simple possibility, of individuality.

### 3.3 All unity is relative

Chronologically, the notes on Schopenhauer and Kant are preceded by a far more fragmentary set of notes on Democritus. Rather than mere happenstance, the conjunction of this largely philological inquiry and of the far more abstract investigations into organicity and individuation is connected to what Nietzsche indicates as the core of Democritean materialism: *the denial of teleology*. It is this denial that accounts, amongst other things, for the apocryphal report of Plato's plan to incinerate the totality of Democritus' works, as well for the latter's reputation among mediaeval monks as a man possessed. It is also what links Democritus to Empedocles and Darwin, for whom purposiveness amounts to an objective illusion generated by a non-intentional process. On this matter Nietzsche's sympathies will remain with the materialist inspiration. His objections, in these notes as elsewhere, will be directed against the uncritical *belief* in the transparency of matter, as evidenced by atomism, as well as against the attendant ethical *conservatism* produced by such a belief. It is to counter the epistemic naivety and narrow-minded ethics that often mar ancient materialism that Nietzsche will subscribe to Lange's general principle according to which materialism must be followed by and subjected to critique; in brief, that each Democritus must have his Protagoras. In line with our guiding theme, we will now consider the influence of such a critical materialism via Lange's brief treatment of

individuality and individuation in the chapter from the *History of Materialism* entitled 'Darwinism and Teleology', arguably the primary inspiration for many of Nietzsche's remarks on Kant and teleology.

Lange begins by invoking a question 'which is of the highest interest in the history of Materialism – the question of the nature of the organic individual'.<sup>15</sup> Perhaps it was this very sentence that sparked the plan for Nietzsche's eventually aborted dissertation, promising a focal point upon which his determination of the limits of materialism and his questioning of the 'borders of individuation' could converge. What follows in Lange's text is crucial in this respect. Together with the long passage from *The World as Will and Representation* quoted in Section 3.2, it can in fact be looked upon as the germ of much of Nietzsche's thinking on individuality:

We have seen how ancient Materialism fell into absolute contradiction by regarding the atoms as the only existent, though they cannot be the bearers of a higher unity, because without pressure and collision no contact takes place between them. But we also saw that precisely this contradiction of manifoldness and unity is peculiar to all human thought, and that it only becomes most obvious in Atomism. The only salvation here, too, consists in regarding the opposition of manifoldness and unity as a consequence of our organization, in supposing that in the world of things in themselves it is resolved in some way unknown to us, or rather does not exist there. In this way we escape the inmost ground of the contradiction, which lies in the assumption of absolute unities, which are nowhere given to us. If we conceive all unity as relative, if we see in unity only the combination of our thought, we have indeed not embraced the inmost nature of things, but we have certainly made possible the consistency of the scientific view. It fares ill indeed with the absolute unity of self-consciousness, but it is not a misfortune to get rid of a favourite idea for some thousand years.<sup>16</sup>

In Schopenhauer, the attempt to circumscribe the domain of representation, to trace the borders of individuation at the edges of the world of appearance, depended on the irreducible distinction between a unity *without* multiplicity and a unity *of* multiplicity. In this sense, Lange's dismissal of any unequivocal demarcation of the transcendental from the physiological, as mediated by the dialectic of unity and multiplicity, is an essential component in Nietzsche's critique of the philosophy of the will. Rather than being delimited and subjected to the hegemony of the

*principium individuationis*, the domain of representation and experience is relativized (as a 'consequence of *our* organization') and unhitched from its link to an unrepresentable and groundless unity *without* multiplicity, whether this be conceived as Will or as the 'absolute unity of self-consciousness'. The ascription of unity is recast as an objective illusion generated by physio-transcendental constitution, but in itself devoid of genuine necessity. It does not constitute a determination of the sphere of the possible as such, but a contingent property belonging to the organization that underlies our cognitive capacities, our propensity to combine appearances into objects and count them as one. With Lange, the 'utopian' resolution of the contradiction of unity and multiplicity within a non-phenomenal realm is gestured at, but no longer in favour of a unity without multiplicity. Instead, persuaded that the latter would merely trace the constitutive illusions of experience, above all those of the I and the object, Lange's preference lies with an agnosticism about things-in-themselves, which suggests that in the end *there might be nothing to resolve*, since the opposition of unity and multiplicity is but a chimerical, albeit seemingly intractable, effect of 'our organization'.

Moreover, this naturalization of the transcendental, which some might be quick to pillory as vulgar 'psychologism', functions to counter the Schopenhauerian impasse *vis-à-vis* the question of the genesis or origin of language. Once the domain of representation is no longer coextensive with that of possibility and the *principium individuationis* is no longer of the order of the always-already, the question of the non-representational ground of representation, of the preindividual sources of individuation, is opened to interrogation. The non-representational is no longer drowned in the black night of the will's immediate unity. Indeed, it even appears that the predicate of unity is to be suspended when dealing with the preindividual, since 'all unity is relative'. Are we in the presence of yet another inversion? Is Lange indicating that we direct our thought to what *precedes* or *subtends* the combinations of our intellect as multiplicity? Posed in this way, the question cannot be answered in the affirmative. Neither Lange nor the Nietzsche of the early notebooks present us with a genuine concept of multiplicity without unity, a concept that could operate in a non-representational, non-objective ontology.<sup>17</sup> Both thinkers do, however, tend to reverse the Schopenhauerian stance according to which the *principium individuationis* constitutes the prior *condition* for multiplicity. On the contrary, the relativization of unity predicated upon the farewell given to that 'favourite idea', self-consciousness, makes the infinite proliferation of multiplicity, its availability as the material upon which the intellect

carves its relative unities, into the precondition for unity itself. Within what nevertheless remains a very tentative consideration of the question of the One and the Multiple, based on the naturalization of the critical project and the confrontation with the paradoxes of the Will, we could summarize the stance proposed by Lange and the early Nietzsche in the following dictum: *a multiplicity is a unity for another multiplicity*. Or, returning to the theme of the anomaly of the organic: *a multiplicity is an individual for another multiplicity*.<sup>18</sup>

### 3.4 Life force = ?

Chance can find the most beautiful melody.

*On Teleology*

The critique of Schopenhauer awoke Nietzsche to the urgency of the problem of individuation, specifically configured in terms of the relationship between the intellect as a representational mechanism and the question of its origin; that is, to the articulation of *representation* and *production*. Schopenhauer's aporetic treatment of the 'borders of individuation' induces that dichotomy which effectively forecloses the question of individuation itself, positing a non-representational One over against the hegemony of the *principium individuationis* within the phenomenal or representational realm. With Lange, individuation comes to be relativized in a naturalization of the transcendental that proclaims, with Goethe and Virchow, the *primacy of multiplicity*.

We are now in a position to see why there was nothing arbitrary in Nietzsche's intention to undertake a thesis on 'The Concept of the Organic since Kant'. After all, it is in the problematic demand posed by the evidence of the organic that the thought of representation first encounters the question of material production or ontogenesis, in the guise of a modality of individuation that does not respect the restrictions imposed by the *principium individuationis*.<sup>19</sup> In the terms proposed in these notebooks, it encounters the problem of a life heterogeneous to the Kantian power of desire, a life other than that of the intellect. In this Nietzschean perspective, the anomaly of the organic announces the *crisis of critique*. As with the several crises and impasses punctuating the critical project, it can of course be articulated as a functional and essentially unthreatening episode within the advance of reason, such that the organism is employed to symbolize the unrepresentable unity of the system together with its supersensible destination. Whilst Nietzsche himself in no way ignores the symbolic usage of organic teleology, he chooses



to engage in a series of 'reductions' that will displace this crisis from the question of organic teleology to its new locus, that of production itself, or, in accordance with Nietzsche's predilection in these early notes, *life*. Nietzsche will therefore begin by bracketing the intrasystemic function of the problem of the organic, so as to then examine it in terms of the thematic of individuation outlined above, finally immersing it into the far more wide-ranging problem of life as infinite, productive multiplicity.<sup>20</sup>

This passage from a crisis that is functionally, symbolically immanent to critique, to the crisis of critique itself, takes place in four stages or reductions: (1) the expulsion of the theological; (2) the denial of external purposiveness; (3) the relativization of individuality; and (4) the dissolution of the antithesis between mechanism and teleology.

The expulsion of the theological concerns the symbolic relation that binds the problematic concept of the organism to the equally problematic concept of an entity endowed with intellectual intuition, a supersensible being for whom the organism would represent an intelligible causality of the whole over its parts.<sup>21</sup> In stark opposition, we find the following materialist injunction at the core of Nietzsche's polemic: 'One must sever every theological interest from the question' (239). This theological referent is inseparable from an anthropomorphic analogy founded on a determinate understanding of human *poiesis*. In a passage originating in Schopenhauer and prefiguring Bergson's later critique of evolutionary theory, Nietzsche writes: 'We are astonished then at the *complicated* and conjecture (after human analogy) a special wisdom in it' (241).<sup>22</sup> Once this anthropomorphic propensity to isolate objects as purposive in accordance with a technical analogy is suspended, so is the necessity of a reference to a *higher reason* that would account for those instances of individuality that cannot be summarily ascribed to the effects of the *principium individuationis*. In a deeply materialist vein, Nietzsche will claim that there is 'no question, which necessarily can be solved only through the acceptance of an intelligible world' (240). In other words, just as the Kantian necessity to think organisms as premeditated disappears for 'us moderns' under the influence of Darwinism, so does that of assuming the contradictions engendered by representation and viewing them as inevitably issuing into their resolution in a realm of supersensible intelligibility. The anthropomorphic foundations of physico-theology give way to 'a purely human standpoint: the Empedoclean, where purposiveness appears only as an instance among many non-purposivenesses' (239). This standpoint effectively removes the presupposition of the integral intelligibility of the individual, as subsumed under rules or as determined by the idea of a whole. The polemical

statement, 'purposiveness is chance' (239), aimed at the objections to Empedocleanism voiced in §70 of the *Critique of Judgment*, points us once again to the denial of any analogy with technical or productive intentionality, to the need to think the genesis of the purposive in non-representational, non-intentional and non-anthropomorphic terms, in brief, to think 'a power which unconsciously creates the purposive' (239). Lange's demotion of the transcendental to the level of *our* organization enables the acknowledgement of our propensity to a 'theo-techno-anthropological' understanding of organic teleology, at the same time as it indicates the possibility of another thought, concerned with another causality. When Nietzsche notes that the 'necessity of which Kant speaks [i.e. the "necessity that we think organisms as premeditated"] no longer exists in our time' (238), he is opening the possibility of thinking the organic with no reference whatsoever – not even a problematic one – to a realm of transcendent purposes and intentions. The Empedoclean insight at the basis of the Darwinian revolution in the natural sciences permits us to introduce the speculative idea that the teleological appearance of the organic may have been produced by what Nietzsche names 'coordinating possibility' [*koordinirte Möglichkeit*] (240). Though the clues thrown up by the notebooks are scanty in this respect, such a co-ordinating possibility can be envisaged in terms of the genetic convergence and relational complexity characterizing the non-intentional, non-ideal mechanisms which give rise to the appearance of intentional teleology.

The second 'reduction' within the displacement of the crisis of critique from the organism to production involves a further step away from the overt aims of the Kantian project. Having severed any explicit symbolism or reference to a higher reason, Nietzsche proceeds to eliminate any trace of divine intelligibility, challenging the necessary postulate of external purposiveness. The idea of co-ordinating possibility, which permits the isolation of purposiveness as a mere instance within a horizon of non-purposiveness, comes to be expressed in the properly Darwinian concept of a non-intentional mechanism for the production of purposiveness. Indeed, the presupposition of an 'overarching teleology' (239) is obviated by the very idea of a survival of the fittest. Thus, opposing any attempt to harmonize the realm of appearances in a system of ends, to absorb it in the pure unity of a will, or to posit an external purposiveness that would serve as the symbol of the purposiveness and unity of the intellect itself, Nietzsche will remark that 'the opposite to the whole theory arises in that terrible struggle of individuals ... and the species' (239). Once again, the attempt to locate a symbol of the unity, systematicity and purposiveness of the intellect (or of the will) within the

realm of the organic is declared illegitimate. No compulsion demands we posit, even problematically, an external and systemic purposiveness. Neither the demiurge of finality nor the harmony of nature have any legitimate claims over the organic. We are thus left with the phenomenon of inner purposiveness alone. It is solely on this level of the Kantian problem of the organic that Nietzsche's inquiry dwells. Inner purposiveness cannot be easily dismissed by a sheer invocation of Darwinist materialism or science in 'our times'. The following passage is crucial in this respect:

Teleology:

inner purposiveness. We see a complicated machine, which maintains itself and cannot devise another structure which could construct it more simply, that means only:

the machine maintains itself, thus it is purposive. A judgment about 'highest purposiveness' is not ours to make. We can at best decide upon a reason, but have no right to indicate it as higher or lower.

External purposiveness is a deception.

But we are acquainted with the method of nature, how such a 'purposive' body arises, a senseless method. Accordingly, purposiveness demonstrates itself only as ability to live, that is, as *cond. sine qua non*. Chance can find the most beautiful melody.

Secondly we know the method of nature which would maintain such a purposive body. With senseless frivolity.

Teleology however raises a multitude of questions which are insoluble, or have been until now.

World organism, origin of evil do not belong here.

However, for example, the origins of the intellect.

Is it necessary to oppose teleology with an *explained* world?

It is only necessary to establish another reality on a demarcated realm. (240)

To reduce the question of purposiveness to that of its internal variant is to place scientific materialism before an authentic conundrum, testing its ability to prevail precisely where it declares that the Kantian theses are merely anachronistic. The Kantian stance withers away as we realize that to posit the idea of the whole as the necessary ground for the correlation of its parts, however critically or problematically this is done, is unwarranted. The purposive is wrested from the supposed evidence of the organic as a symbol of creation and brought down to its defining

formal characteristics. Whence the ability of the term *machine* to name the form of purposiveness.<sup>23</sup> Prefiguring one of the foremost theses of contemporary complexity theory, Nietzsche affirms that there is no need to postulate the idea or representation of the organism as a whole, no obligation to introduce an analogue of the human power of desire in order to account for the unitotality of the organism. Instead, abandoning recourse to any form of eidetic transcendence, we should simply acknowledge that *the organism is immediately its own idea*. No transcendent notion of totality is capable of accounting for this instance of organization, precisely because we 'cannot devise another structure which could construct it more simply' (240). *A fortiori*, no representation transcendent to the functioning of the organism can account for the latter's self-maintenance, here identified with construction or ontogenesis. All we can say at this point is that inner purposiveness, drained of any representation of totality, is distilled to the minimal condition constituted by an *ability to exist*. We call purposive an entity whose organization entails its capacity to maintain itself in existence. Having thus eliminated what initially appeared as the necessary link between organization (of self) and representation (of totality), Nietzsche is once again able to argue against the Kantian compulsion whereby the source of these products of nature must itself be intentional or representational. The method of nature is senseless, frivolous. Though it gives rise to entities whose organization elicits the invocation of a causal role for the representation of totality, this is but a function of our speculative limitations, and not an ineluctable trait inhering in the concept of organism itself. What must be absolutely forestalled, in accordance with the polemical vigour of the materialist injunction, is the 'leap' from the evidence of organization to the postulation of a representing or represented cause. To *symbolize* the organism is to fall prey to a 'bad analogy'.<sup>24</sup>

The third moment in Nietzsche's reduction of purposiveness to the problem of life as production entails the relativization of individuality, and the consequent relativization of purposiveness itself. In line with Lange's definition of the dialectic of unity and multiplicity, Nietzsche is in the position to attack the subordination of the organism to the idea of the whole as a merely *relative*, and therefore non-binding, imposition of the intellect onto the material world. As he indicates, the 'simple idea is shattered in a multiplicity of parts and conditions of the organism, but remains intact in the necessary joining of parts and functions. This is accomplished by the intellect' (239). But this necessity is itself put into question, according to the principle that *a multiplicity is an individual for another multiplicity*, wherefrom can be derived the thesis that *individuation*

*precedes teleology.* All ascriptions of purposiveness imply the preliminary isolation of a purposive entity, a whole, that is subsequently considered as functioning in accordance to an end. But as Nietzsche remarks, faithfully following Lange:

The concept of the whole however is our work. Here lies the source of the representation of ends. The concept of the whole does not lie in things, but in us.

These unities which we call organisms, are however again multiplicities.

There are in reality no individuals, rather individuals and organisms are nothing but abstractions. (244)

These reflections take their cue from one of Goethe's dicta, which Lange himself quotes from Virchow (pioneer of cellular biology and originator of the concept of the *Cell-state*) and which will prove crucial for Nietzsche's ideas on teleology: 'Every living thing is not a singularity, but a plurality: even though it appears to us as an individual, it remains a collection of living, independent beings' (242). Yet we must register the radicalization to which Goethe's pronouncement is subjected here. For Nietzsche, no reduction to cellular individuals could provide the sufficient reason of natural organization. Though this reduction can and does indeed take place, it is accorded no absolute or definitive status. As in Lange, all unities are relative, none absolute. Purposiveness itself, predicated upon the absolute nature of a determinate type of unity, a unity of self-maintenance and autoproduction, accordingly undergoes the same relativization.<sup>25</sup>

This procedure issues into the fourth reduction, the final step that takes the crisis of critique from purposiveness to production, from the organism to life. Whilst the notes on teleology often repeat the classically Kantian stance whereby, though we may be able to *think* self-organization we can only *know* mechanism – a position that subtends the characterization of the anomaly of the organic as a crisis *within representation* – the three antecedent reductions ineluctably lead into the fourth and final one, which consists in declaring that *the antithetical determination of mechanism and teleology is unsustainable*.<sup>26</sup> Once the two modalities of individuation that dominate these purportedly incommensurable frameworks for the explanation of nature (objects of representation and purposive individuals, respectively) are reduced to divergent manifestations of our propensity to individuate and thus laid out on the same epistemic plane, that of *our* organization, the organic is definitively

devalued *qua* instance of crisis. Together with 'force, matter, law, atom' it is nothing but a 'reflected judgment'. As Nietzsche remarks, 'final causes as well as mechanisms are human ways of perceiving' (246).<sup>27</sup> We are thus thrown back onto the question of what these early notebooks baptize as the *method of nature*.

Reviving a metaphor he had already inflicted on Schopenhauer, Nietzsche writes: 'The method of nature in the handling of things is indifferent, she is an impartial mother, equally hard with organic and inorganic children' (248). This method is nothing but production or *life*, its children nothing but *forms*. The reduction of the difference between organic and inorganic to a contingent distinction inscribed in the habits of our intellect, not to be accorded any constitutive epistemic status, paves the way for a far-reaching ontological conversion of the problem of individuation and a renewed concern with the preindividual as infinite multiplicity. The fact that this occurs through a distinction between *life* and its *forms* should not lead us to the premature conclusion that we stand before a strain of vitalism influenced by the Schopenhauerian philosophy of the will. Firstly, because the concept of life is brought back to the infinite prodigality of nature's senseless, frivolous method. The prejudices and limitations of representation with respect to the modalities of possible individuation are hereby nullified, with Nietzsche declaring that: '*Life is possible under an astonishing number of forms*' (248). No ontological primacy is to be bestowed upon those forms that our contingent physio-transcendental organization happens to isolate in this vital ocean of possibilities. Secondly, as we already noted, multiplicity is accorded an ontological primacy, meaning that life is no longer considered as the simple predicative negation of representation, but designates instead the non-representational source of representation itself:

We grasp about a living thing nothing but forms. The eternally becoming is life; through the nature of our intellect we grasp forms: our intellect is too dull to recognize continuing change: what is knowable to it it calls form. In truth there can be no form, because in each point sits infinity. Every thought unity (point) describes a line.

A concept similar to form is the concept of the individual. Organisms are called unities, goal-centres. But unities only exist for our intellect. Each individual has an infinity of living individuals within itself. It is only a coarse perception, perhaps taken from the human body.

All 'forms' can be thrown out, but life! (249)

Having traversed the four reductions of the Kantian problem of the organic, Nietzsche returns to the question of the borders of individuation that had dominated his earlier critique of Schopenhauer. It is not the organic that signals the crisis of the critical apparatus, but rather life, understood as the infinite multiplicity of the preindividual attained in the consideration of the method of nature. Moreover, the method of nature designates the dissipation of the strong epistemic claims emerging out of Kant's treatment of inner purposiveness, opening up the problem of individuation to the question of ontogenesis. To the extent that it necessarily presupposes this ground of productive multiplicity and infinite becoming, '[t]he individual is an insufficient concept' (251).

But it is not sufficient to move beyond the anomaly of the organic, indicating the encounter with preindividual production as the true crisis of the critical project. When Nietzsche writes: 'The organism is a form. If we look away from the form, it is a multiplicity' (243), we are not in the presence of a banal, petulant subreption of critique. The formative efficacy of representation and the relative hegemony of the *principium individuationis* cannot be thrown aside without further ado. Neither can Nietzsche renege upon his own fidelity to critique's immanent inquiry into the anthropocentric fallacies and metaphysical excesses that often accompany the cognition of objects and the systematization of experience. Rather, the recourse to the concepts of life and multiplicity seeks to confront the fact that representation cannot account for its own operations; in other words, that its *closure* is unsustainable. In addition, it aims to do this without falling into the fatal snare of apophatic ontology, the preindividual conceived of as the sterile negation of the predicates of the represented.

### 3.5 A materialism without matter?

We have seen how Nietzsche's early engagement with the question of individuation leads him to a thinking of the preindividual, to life as infinite, productive multiplicity. Here Nietzsche applies a critical or transcendental materialism, joining materialism's demand for an asymmetry of production (representational individuation must be accounted for in non-representational terms) and critique's vigilance against the illusions of the anthropomorphic and the prevarications of metaphysics (the preindividual cannot be reduced to matter, especially in light of the solidarity that binds the *concept* of matter to the objective illusions constitutive of representation itself; for example, the atom as *principium individuationis*). Accordingly, a transcendental materialism for which

matter is not transparent to intellect, a paradoxical materialism without matter, will preoccupy itself with the problem that Nietzsche deemed foremost amongst those left unsolved by the reduction of teleology to production: *the origin of the intellect*. The problem of individuation as production thus finds itself enmeshed in the seemingly circular question: How is the intellect as representing mechanism, and seemingly originary agent of individuation, *itself* individuated? In the gap between individuation by the intellect and individuation as production, initially opened in Kant by the organism as the first crisis of critique, Nietzsche's effort, in the wake of the impasses of tragic affirmation and the struggle against 'the pain of individuation', will lie in constructing an experimental ontology capable of addressing the question of the origin of the intellect *from the point of view of production*, thus clearing the way for an investigation into the simultaneous genesis of matter and intellect.<sup>28</sup> Like Deleuze after him, Nietzsche will attack the philosophy of representation for falsifying the difference between the preindividual element of productivity and becoming, on the one hand, and the individuated domain of the representing intellect, on the other. Whence the importance, in this early polemical encounter with Kant and Schopenhauer, of the origin of the intellect understood as the problem of the individuation (ontogeny) of the mechanism of individuation (objectification and measure)<sup>29</sup> itself.

In his 1872 notes towards the unwritten essay *The Philosopher: Reflections on the Struggle Between Art and Knowledge*, Nietzsche encapsulated this problem in a conceptual image he would repeatedly return to, that of Ernst Chladni's 'sound figures'.<sup>30</sup> These are patterns drawn onto a sand-covered plane by an experimental device using sound vibrations to determine the movements of a string affixed below the sand's surface. It is the asymmetry and lack of resemblance between the productive dimension of the vibrations and the represented patterns that metaphorizes the problem and the task of a non-representational account of representation built upon the notion of individuation as ontogenesis. This asymmetry at the heart of individuation means that materialism can never have done with the speculative vigilance that arguably constitutes the most enduring legacy of Kantianism, that it can never abandon the resolute critique of the kind of dogmatic materialism that would announce nothing less than the return of representation in disguise. Due to this insistence of critique, the terms 'life' and 'multiplicity', which populate the notes on teleology, do not attain the status of veritable concepts: they still remain, as Nietzsche acknowledges, 'dark'. What they do indicate, in a manner that is of great significance



both for Nietzsche's later forays into ontology and for any further reflections on the tangled fates of materialism and critique, is the persistence of the problem of individuation at the core of any treatment of the mechanisms of representation, in the passage from the first crisis of critique, which opposed the *principium individuationis* to the individuality of the organic, to the second crisis of critique, which discovers the method of nature in a concept of life as infinite multiplicity, prior to any representational individuality whatsoever.

Having completed our assessment of the profound consequences upon the philosophy of individuation of Kant's thematization of the paradoxical status of self-organized beings, we will now move, with Peirce, Simondon and Deleuze, to an interrogation of how the method of nature evoked by Nietzsche has been further defined, both ontologically and operationally. The object of this exercise will be to extract some key elements that could serve as privileged ingredients in the articulation of a truly post-Kantian ontology of anomalous individuation.

## **Part II**

# **Elements for an Ontology of Anomalous Individuation**

*This page intentionally left blank*

# 4

## Systems of Habit: Ravaisson, James, Peirce

A spinal cord without memory would simply be an idiotic spinal cord.

Henry Maudsley, *Physiology of Mind*

### 4.1 Habit as a method of nature: ambivalence and paradox

Much like our earlier encounter with the *Opus Postumum*, our treatment of Nietzsche's notebooks on teleology left us facing the *x* of production, the opaque but imperious demand for an approach to individuation that would suspend or overcome the parameters of the 'Antinomy of Teleological Judgment' – that is, the partition between a merely regulative speculation concerned with teleological organization, on the one hand, and a determinant mechanistic causality, on the other. Simply by posing the problem of the genesis of the intellect, Nietzsche exposed the hastiness and fragility of such a partition, predicated as it is upon a stark demarcation between modalities of individuation that themselves remain insufficiently accounted for, not to mention laden with the prejudices of common sense. The theme of asymmetry, arguably the driving force behind Nietzsche's successive reductions, casts suspicion on the legitimacy of any approach that would subordinate all accounts of individuation – and *a fortiori* of 'life' or 'production' – to the form of objectivity that the subject of cognition demands as its indispensable correlate. Yet for all its corrosive impetus, and despite representing a considerable achievement in its own right, Nietzsche's bold reduction of the anomaly of the organic to the plural ontology of vital production does not go beyond a preparatory deployment of the problem of a non-representational (or non-intellectualist) ontology of individuation.

Whilst it has indeed been argued that Nietzsche's notebooks from the 1880s do display a remarkable set of insights that can be enlisted to transform the Kantian co-ordinates of the problem of individuation into a force-ontology of conflict, assimilation and selection (Müller-Lauter), or, alternatively, into a time-ontology of events (Nabais), we have chosen instead, because of its greater pertinence to our overall scheme, to focus at this juncture on an area of speculation that perhaps best exemplifies the metacritical potentialities of what Nietzsche had somewhat enigmatically termed the 'method of nature': the philosophy of *habit*.<sup>1</sup> As we come to consider this topic through the writings of Félix Ravaisson and William James and, above all, in the cosmogonic speculations of Charles Sanders Peirce, it will become evident that these incursions into the philosophy of habit offer some of the most pertinent responses to the questions elicited by Nietzsche's early engagement with the anomaly of the organic. As we will see, the dominant themes isolated in the previous chapter – materialism without matter, life as infinite multiplicity, the genesis of the intellect, the relationship between chance and teleology, and, enveloping them all, the method of nature – are all active, and actively recast, by these thinkers.

It may at first seem incongruous to endow habit with such a prominent role in an inquiry primarily concerned with ontology and individuation. In order to dispel this impression, let us take a brief terminological detour. A useful foothold for confronting the polysemy of the concept of habit is to be found in the entry '*Habitude*' of André Lalande's *Vocabulaire critique et technique de la philosophie*. Far from establishing a univocal meaning for the term, this entry – comprising 'observations' by such prominent contemporaries of Lalande as Brunschvicg, Couturat and Lachelier – manifests the notable role of habit as an operator of transition within and beyond a whole host of metaphysical dualisms, while also registering the recurrent disputes induced by its constitutive ambivalence. Dominique Janicaud gives an eloquent definition of this ambivalence in an article devoted to the question of habit in Maine de Biran and Ravaisson, a definition we could easily glimpse as operative in the majority of the philosophical definitions of habit. It exhibits what could be termed one of habit's *phenomenological invariants*:

On the one hand, habit is nothing but the ever weakening re-conduction of an impression that is enfeebled, like a dying echo; on the other, the repetition of the action clarifies it, facilitates it, assures its perfection. In our lives, we constantly experience this ambivalence of habit. *Janus bifrons* working like time towards growth and expansion

as well as degradation and erosion. Without habit, no maturing of intelligence, of taste; but as a result of habit, how many sources dried up, freshness lost, enthusiasms buried under the grey shroud of routine.<sup>2</sup>

Perhaps the most significant among the points of contention signalled by the *Vocabulaire* relates to the tension between the two principal acceptations of the term. The first, which could be identified as essentially pre-modern, is that of a 'state' or 'disposition' of being, in accordance with the Stoic and Aristotelian usage of the term *hexis*, or the Mediaeval Latin (and even Cartesian) connotations of *habitus*. It is this meaning that re-emerges in Ravaisson's metaphysical treatise of 1838, *De l'habitude*: 'Habit, in the broadest sense, is the general and permanent manner of being, the state of an existence considered either in the totality of its elements or in the succession of its epochs'. Ravaisson is also enlisted by Lalande to supply the most succinct statement of the second philosophical meaning of habit: 'But what is understood especially by habit is not only the acquired habit, but the habit contracted, following a change, with regard to the very change that gave birth to it'.<sup>3</sup> Lalande then proposes to divide this (second) meaning into three variants, concerned with: (1) the phenomenon of adaptation in general; (2) specifically biological adaptation; (3) the psychological acquisition of habit constructed upon an initial act of will. We will return to these variants in what follows, but what is of immediate interest is the discord amongst the contributors to the *Vocabulaire* with respect to the significance of the two principal senses of habit, a discord that Lalande's montage of opinions leaves very much unresolved.

The editor himself deems the first, 'dispositional', sense superfluous, arguing from its complete absence from Francophone usage; Victor Egger remarks that it is not even worth mentioning, chalking it up to the idiosyncrasies of Ravaisson's project; Lachelier, on the contrary, supported by both Couturat and Brunschvicg, considers this meaning of habit, both historically and conceptually, as 'fundamental'. The stakes of the debate come down to the extension that is to be ascribed to habit. The minimalist option is to relegate it to an operation characterized by acquisition through repetition, by the decrease of intensity and the perfectibility of action. From this perspective, habit itself is not productive of beings. It is only with the second approach that we can begin to consider the idea of habit as an agent or factor of individuation. If, as Lalande and Egger propose, habit as contraction is to be severed from habit as the state or property of a thing, the former can no longer be considered as ontologically constitutive: it merely designates a process

that affects or qualifies an already constituted entity, whether this entity be physical, biological or psychic. On the contrary, if we follow the indications of contributors such as Lachelier, habit can be considered both as the general state of being *and* as the procedure whereby this state is attained, in such a manner that the difference between the dynamics of individuation and the state of the individuated is only relative.

Punctuating this debate about the significance of state and process in the definition of habit we encounter three questions, all of which are indicated by the *Vocabulaire*: the distinction between passive and active habits; the relationship between habit and repetition; the question of habit's relationship to the organic. The distinction between active (or positive) and passive (or negative) habits derives from Maine de Biran's early work, *L'influence de l'habitude sur la faculté de penser*. Whilst Biran's goal is to decompose the ambivalence of the effects of habit in order to reveal its divergent relations to the faculties of sensation and perception – the first being the object of the decrease, the second of the perfectibility engendered by habit – his starting point exemplifies, with a rare intensity of rhetoric and observation, the figure of habit as the intimate nemesis, at once fugitive and inescapable, of philosophical activity and indeed of thinking as such: 'What is then this *protean* habit that escapes us when we believed we had grasped it, which sometimes softens, sometimes irritates our sensibility, sometimes weakens and sometimes vivifies our modifications?', he writes in *L'influence*.<sup>4</sup> The project of analysing this ambivalence into the passive and active faculties at its source is, much like Bergson's treatment of habitual and mnemonic recollection in *Matière et Mémoire*, simultaneously an ethical and a philosophical task. What we have here is a variation on the Schopenhauerian and Nietzschean theme of the 'pain of individuation', determining philosophy's task, not as that of evading the thrall of identity, in the guise of the spatialized and temporalized concept, but rather as the struggle against the density and viscosity of experience, against the forces of repetition and sedimentation that thwart thought's capacity to grasp its objects firmly, definitively, intensely. In Maine de Biran, the philosopher encounters habit as his own Sisyphean lot, to be vanquished over and over again, in a search for the originary spontaneity or intellectual effort concealed by the sedimentation of experience.

To object to this polarization of habit within a doctrine of the faculties – as Lachelier does in the *Vocabulaire* – and to place one's ontological speculations in the element of ambivalence, oscillation and reversibility between process and state, is perhaps another necessary prelude to considering habit as a *method of nature*; that is, not merely as a derivative

operation obfuscating the lucid functioning of intellect, but as a *constitutive element* in an ontology of individuation. The hypothesis that I would like to entertain in the rest of this chapter is that habit might not simply shroud, but rather account for, the division of active and passive, matter and mind, or process and state.

The other two themes broached in the *Vocabulaire* deserving of our attention – repetition and the organic – are even more redolent of the problematic of individuation. In Ravaisson's treatment of the second aspect of habit, the modifications engendered by habit are defined in terms of continuity and repetition, conceived as the conditions for the genesis of habit and its individuation as the *disposition* or *state* of an entity. Having said that, Lalande's entry does refer to Lemoine's *L'habitude et l'instinct* in order to uphold the claim that repetition does *not* inhere in habit. Whilst this claim does not explicitly appear in the authors we will be considering in the remainder of this chapter, its consequences for the role of habit in the philosophy of individuation are worth noting. If our concern is with habit as the disposition of an entity to act similarly in like circumstances we cannot but address the constitution or individuation of that disposition. It is thus perfectly plausible to consider the contraction of habit as an event that does not depend on either the continuity or repetition of a prior modification. This individuation of habit would then constitute a sort of 'first repetition' or, as Renouvier puts it, 'the infinitesimal element of habit'. Whilst not going so far as to equate habit and individuation – which he is prevented from doing by his dismissal of the Stoic philosophy of dispositions – Lalande does provide strong arguments in favour of such a stance. Against those who claim that habit as an engendered predisposition is inseparable, both in its production and its manifestation, from the factor of repetition, Lalande counters that to turn repetition into a constitutive link is to fall prey to a mere prejudice founded on the unexamined postulates of common sense: 'one must not confuse the *manifestation* of habit, which renders it sensible to us, with the biological modification that constitutes it ... the real phenomenon is not the 'ease' or 'perfection' of the act, characters all of which are relative to our utility, but the permanent disposition left in the organism'.<sup>5</sup>

Whilst this might leave us under the impression that Lalande endorses a restriction of the domain of habit to the organic alone, that is not so. In response to an observation by Mentré proposing that the habits of the inorganic are mere 'pseudo-habits', Lalande retorts that 'all the *characters* of habit, whether morphological or functional, can be found in non-living beings, with only a lesser degree of complication'.<sup>6</sup> We could add that



what makes habit into a candidate for the title of 'method of nature' is precisely its indifference to any vulgar vitalist partition between the organic and the inorganic. This is the precondition for a fruitful inclusion of the ontology of habit in any inquiry regarding individuation: to understand habit as involving not simply the mere acquisition or modification of dispositions, but the genesis of 'states' of being themselves.

Since we will consider this fully 'genetic' variant of the concept of habit to test its consistency as a model of individuation that cuts through the opposition of mechanism and teleology, our investigation will inevitably transgress the boundaries of the practical and psychological doctrine of habit belonging to Hume and to the empiricist tradition. This is not to downplay the formidable role played by Hume in the delineation of the guiding traits of the concept of habit, as well as the considerable role that Deleuze's own encounter with Hume's thought plays in his own philosophy of individuation. We simply wish to note that the broader problem domain into which we are endeavouring to insert the question of habit, that of an asymmetrical productivity or of an ontology of anomalous individuation, is not present in the classical formulation of empiricism. As Deleuze himself notes in *Empiricism and Subjectivity*, the Humean doctrine of association is not preoccupied with genesis but only with the principles that govern the constitution of human nature. On the contrary, both Deleuze's and Peirce's concepts of habit shift it from a practical and psychological terrain to an ontological one, where the question is indeed that of genesis and individuation. Whether wresting the concept of habit away from the realm of the psyche is possible, and whether it can be enlisted into the task of laying out a post-Kantian theory of individuation will be the object of this chapter.

There is one element in this doctrine that we must consider in order to complete this prospective sketch of habit as a 'method of nature'. The many tensions exhibited by Lalande and his contributors have provided us with the occasion to note the essential ambivalence of habit, operating as it does between a host of enduring metaphysical dichotomies, not the least of which that of the passive and the active, as emphasized by Maine de Biran. This ambivalent or oscillatory character of habit is perhaps the basic phenomenon through which it is both encountered and defined. Yet accompanying this ambivalence in the phenomenon or operation of habit, there is also a paradox in its concept. There is something inexorably circular or iterative about habit *qua* principle either of modification or individuation. As Deleuze notes, 'the paradox of habit is that it is formed by degrees and that it is a principle'.<sup>7</sup>

A philosophical focus on individuation can in many respects be viewed as a 'protest against principles',<sup>8</sup> aimed at the manner in which the latter block – as instances of *anticipation* – the investigation of ontogenesis. Deleuze's treatment of Hume – rather unique among his works in this respect – seems to invert this approach. As he writes: 'In Hume's empiricism, genesis is always understood on the basis of principles, and as a principle.'<sup>9</sup> And yet this principle of habit is a principle of an extremely peculiar sort, consisting of 'the habit of contracting habits'. Its horizon of functioning, which in Hume is all but coextensive with human nature, is thus as ample as its specification is vague. As Peirce himself will adumbrate, the reign of habit is of the order of the general (if not constitutive of generality itself) and principle alone does not allow us to anticipate the precise traits that individual habits may take, nor the psychic and material arrangements that they may come to command. This is why Deleuze thinks that Hume's associationist philosophy does not constitute a naturalized narrative of the formation of the self, but is occupied instead with the artificiality of human nature, with the practical deliberation and institution of those habits that determine the psycho-social configurations of the human.

Leaving aside the relationship between human nature and associationism, which lies beyond the scope of our investigation, we can note that what defines Humean habit as a principle and not as a modality of ontogenesis is its coupling with another principle, the principle of experience. Experience is here defined as 'the repetition of similar cases'.<sup>10</sup> Defined by the faculty of understanding (as opposed to imagination), the principle of experience is resolutely atomistic, consisting of nothing but the collection of cases or instances whose repetition alone is utterly insufficient for the production of inference, and even less for the emergence of a self. A separate principle of habit is thus needed precisely because the modality of individuation pertaining to the *cases* of understanding is fundamentally sterile, unable to generate by itself any synthesis that could turn a mere collection into an actual, progressive relation. The fundamental category of this relation, causality, cannot rest upon experience alone:

The true content of causality, the word 'always', cannot be constituted by experience, because, in a sense, it constitutes experience. It is not a reasoning that renders reasoning itself possible; reasoning is not immediately given in the understanding. The understanding must receive from another principle than that of experience the faculty of drawing conclusions from experience itself, to go beyond experience

and infer. A repetition is not by itself a progression, it forms nothing. The repetition of similar cases does not make us advance one step, because the second case has no other difference from the first than that of coming afterwards, without discovering any new idea.<sup>11</sup>

Yet what would happen if we were to displace the problem and test the possibility that repetition itself might be a morphogenetic or ontogenetic instance? What if we were to experience the full paradox of the principle of habit when it is bereft of its atomistic counterpart, experience? What if we consider, with Maurizio Ferraris, that Hume may have been ‘too timid’ in his approach, and pose the following questions: ‘Does habit really just create belief, and not also experience? And, if it creates experience, is it really just habit?’<sup>12</sup> To answer these questions we will seek textual support in some authors who attempted to extend the domain of this paradoxical principle beyond the confines of an inquiry limited to the social or psychic cohesion of atomized experience.

## 4.2 The sedimentation of desire and the canalization of matter: two images of habit

### Félix Ravaisson, *De l’habitude*

As the entry and observations in Lalande’s dictionary suggested, it is to Ravaisson that one must turn for a properly metaphysical characterization of the concept of habit, going beyond the specifically psychological or biological traits to which habit is most often reduced. The minimal phenomenology of habit in Ravaisson features many of the traits hitherto discussed, chief amongst them the ambivalence pointed out by Maine de Biran, the centrality of repetition, and habit’s place in any understanding of continuity. Ravaisson’s originality lies in showing how habit, rather than remaining an abstract mechanism or the diagram of a process to be registered in varying domains (physical, biological, psychological), can be turned into a crucial operator within a philosophy of nature. Historically located between Schelling’s *Naturphilosophie* and Bergson’s philosophy of creative evolution, Ravaisson’s project is best understood as an inquiry into the conditions according to which thought could rejoin the movements and phases of *natura naturans*, in such a manner that philosophical speculation could reappropriate the productive impetus latent within the solidified results of ontogeny. Given these philosophical affinities, it is not surprising that Ravaisson remains to a great extent negatively inscribed within the Kantian matrix that we outlined in Chapters 1 and 2, and whose Nietzschean destruction was the object of Chapter 3.

Having begun *De l'habitude* with an ontological generalization of the classical traits of habit – thus providing, as already noted, the two main definitions for Lalande's *Vocabulaire* – Ravaisson proceeds to inscribe the problem of habit at the frontier between life and mechanism. Ravaisson does not begin with the world of inorganic matter in order to construct a continuum of entities and ontological regions through the algorithmic powers of habituation. Instead, he wishes to indicate a caesura that habit will then come to efface – at the cost of resuscitating the spiritualist thesis of spontaneous production. Ravaisson determines the apparent world – the world of Space and Time – as a world of infinite matter governed by the law of inertia, whose most elementary form is 'mobile extension', considered as the defining ontological trait of bodies. Throughout this inorganic domain, and whatever the complexity of the combinations at play within it, habit cannot take hold. Why? Because the inertial and extended being of the inorganic lacks the spatiotemporal differentiation that would allow it to contract changes and invest them with a relative permanence. In matter, power and actuality remain without interval, action and reaction are immediate and equivalent. In 'this empire of immediation and homogeneity that is the inorganic realm' habit is absent, for there is nothing to conserve it, nothing to be modified or shaped by its plastic force.<sup>13</sup> It is indeed a question of difference here, inasmuch as Ravaisson's inorganic is devoid of any 'interval' between power and its actualization, capacity and effect. For habit – understood as the primordial character of being in becoming – to *be*, it must be able to *take hold* in something. The fugitive homogeneity of the inorganic domain – infinitely divisible, constantly changing – is a surface hostile to the contraction of habits. An individuality must be identified that could serve as the recipient of change.

There are numerous echoes of Leibniz in these pages of Ravaisson. First and foremost in the following ontological formula: 'In a homogenous whole, there is being, without doubt, but there is not a being'.<sup>14</sup> Habit only arises when Organization and Life enter the stage, the first defined as 'heterogeneous unity in space', the second as 'successive unity in time'.<sup>15</sup> At this point it appears that habit, far from constituting a motor of differentiation, is a secondary process, predicated on the ontic partition, of Kantian origin, which so often serves as the matrix of the philosophy of nature: the difference between the organic and the inorganic. The organic, defined by its mereological and topological differentiation (the reciprocity of parts and the emergence of a threshold between inside and outside) as well as by the heterogeneity of its durations (intervals and intermittence) is posited as the ontological *sine qua non*

for the reception of habitual modifications. These can only take hold upon relatively preconstituted individuals, whose 'disposition, power and interior virtue' is thereby affected. The Leibnizian formula is thus applied to the organic: 'This is no longer mere being, it is *a* being'; 'Only the living being is a distinct nature, just as it alone is *a* being.'<sup>16</sup>

This superimposition of the convertibility of being and unity, on the one hand, and the dichotomy of mechanical and organic being, on the other, gives the impression of evacuating the entire force of habit, subordinating it to the claims of an individuality lodged firmly in the realm of the living. Both the Leibnizian and the Kantian theses are now enlisted for the sake of a pre-eminence of the organic that seems to indicate a distinct preference for vitalism. The possibility of habit as the principle of a material or ontological genesis would thus seem to be altogether foreclosed. Yet if we delve further into Ravaisson's definition of 'Nature' the role of habit appears in a somewhat different light. Ravaisson – whose influence on Bergson in these matters is patent – presents mechanistic nature as a scientific artifice, in which the unity of the scientific object, conceived as a body devoid of extension and dominated by inertia, is postulated to the detriment of any individuality whatever. In short, the 'Nature' of Space and Time at work in the scientific models of the inorganic is a transcendental illusion, governed by the form of the understanding. The paradox of this understanding, which depends on the form of unity but fails to attain individuality, is stated in the following terms:

Consciousness implies science, and science intelligence. The general condition of intelligence, as of existence, is unity. But in the absolutely indivisible unity of the simple intuition of a simple object, science vanishes, and consequently so does consciousness. The idea, object of science, is the intelligible unity of an unqualified diversity. The synthesis of diversity in the unity of the idea is judgment. The faculty of judgment is the understanding ... But there is nothing, in indefinite space that is either definite, or one. It is not in this formless boundless diffusion that I will find unity.<sup>17</sup>

The role of habit thus turns out not to be that of a *mechanism* whereby the individuality of the organic could be 'derived' from the modifications of the inorganic through continuity and repetition, but that of a *method* permitting us to move from the apparent solidity of nature to the spontaneous movement of nature by analogy with our own (biological and psychological) experience of habitual modification. Once the formal emptiness of the body-units subtending the physicist's

nature is allegedly revealed, the question for Ravaisson becomes that of grasping how the fundamental spontaneity of being – which he terms *desire* – comes to be hypostasized into the extremes of material inertia (or Destiny) and decisional autonomy (or Freedom). The ambivalence we registered in habit, conceived both as a passage into unconscious automatism and as an intensification of action, is transmuted into an ontological principle whereby habit ‘explains’ how the real continuity of being can manifest itself in nature as a tension between automatism and autonomy.

This image of ontogenesis is not material but ideal. Habit exhibits the development of an unreflected spontaneity beneath consciousness but above matter – *desire* – which, for Ravaisson, provides the key to the hidden articulations of Mind, Nature and Matter: ‘The law of habit can only be explained through the development of a Spontaneity that is at once passive and active, and equally different from mechanical Fatality and reflexive Freedom.’<sup>18</sup> And yet, given the crucial role played by the notion of analogy in the construction of a philosophy of nature through the concept of habit, this spontaneity is not, to paraphrase Schelling, a point of indifference between the material and the ideal, but rather constitutes a latent idea, a non-representational intentionality or intelligent force beneath the sedimentations of being:

The *idea* becomes *being*, the being itself and the whole being of the movement and the tendency that it determines. Habit is more and more a *substantial idea* ... these ideas become more and more the form, the manner of being, the being itself. The spontaneity of desire and intuition somehow disseminates itself by developing itself, in the indefinite multiplicity of organization.<sup>19</sup>

Though habit is hereby cast as a method of nature, it is as a method that instead of exhibiting the real genesis of individuality permits us to repeat analogically or reproduce the real and unbroken movement of *natura naturans* and to account for its hierarchical differentiation into a concatenation of beings and ontological regions. As the image of the uninterrupted modification of desire – and of its hypostasis into the extremes of Destiny and Freedom – habit is the analogical key permitting ‘concrete thought’ to think from the point of view of spontaneity, to intuit the real continuity of nature lying behind those formal abstractions based on the empty and objective units of the understanding. As Ravaisson writes:

Habit is the common limit, or the middle term of will and nature; and it is a mobile *middle term*, a ceaselessly shifting limit, which advances by an imperceptible progress from one extremity to the other. Habit could

then be said to be the infinitesimal *differential* or the dynamic *fluxion* from Will to Nature. Consequently, habit can be considered as a method, as the only real method, which through a *convergent* infinite series can approximate the relationship, in itself real, but incommensurable in the understanding, between Nature and Will ... [Habit] is an acquired nature, a *second nature*, whose ultimate reason is to be found in primitive nature, but which alone explains it to the understanding. It is, finally, a *natured* nature, the work and successive revelation of *naturing* nature.<sup>20</sup>

Ravaisson's aim seems to be that of dissolving the Kantian antinomy 'by the middle', through an intuition of concrete continuity. And yet, overdetermined by its skewed account of the formally empty Nature analysed and individuated by science, Ravaisson's philosophy exhibits a profoundly derivative and reactive tendency, remarkably akin to the Schopenhauer so ruthlessly criticized in Nietzsche's early notebooks. The question remains: Is habit what explains the individuations of being, through the deferrals and sedimentations that make its spatio-temporal differentiations possible, or is it instead dependent on something other, on a spontaneity that would engender difference by analogy with intentional causation? Is habit in the end but a symbol that would let us pass from the continuity of being to a founding spiritual spontaneity, or can we instead really take things 'by the middle', confronting the relational networks mobilized and embodied by habit?

### **William James, *The Principles of Psychology***

Separated from Ravaisson by half a century of vibrant experimental activity, by a radically different philosophical temperament, and by the speculative demands born of his own scientific research in psychology, William James offers us a very different image of habit than the French spiritualist. Whilst retaining many of the apparent invariants of the concept – most of all its link to repetition and the ambivalence of its effects – James inverts the very presuppositions upon which Ravaisson's account of habit was founded. In his writings on habit, and especially in *The Principles of Psychology*, James unequivocally places habit at the centre of any account of material genesis: 'The moment one tries to define what habit is, one is led to the fundamental properties of matter. The laws of Nature are nothing but immutable habits which the different elementary sorts of matter follow in their actions and reactions upon each other.' And, a few paragraphs later, 'the philosophy of habit is in

the first instance a chapter in physics rather than in physiology or psychology'.<sup>21</sup> This extension of the domain of habit is part and parcel of the attempt in James to ground psychology in a veritable philosophy of the brain, which, whilst giving its full due to the complexity and singularity of the nervous system, would situate it in an unbroken continuum with the functioning of material nature.

In order for this project to come to fruition, it was essential for James to take a step away from the impoverished mechanism that served as the foil for Ravaisson's spiritualism, to consider matter beyond the simplistic diagrams of the understanding and its purely formalistic conception of natural objectivity. The basic criteria of such an approach are: (1) an empiricist relativization of individuality, (2) a foregrounding of plasticity and canalization as the fundamental modes of material becoming, and (3) a displacement of habit from second to first nature.<sup>22</sup>

In his *Empiricism and Subjectivity*, Deleuze states the problem of empiricism as follows: 'how does a collection become a system?', or, how do we pass from the indeterminate set of ideas, the atoms of experience, a set defined as 'a collection without an album, a piece without a theatre, or a flux of perceptions', to something like a self, or a subject?<sup>23</sup> Hume's answer, according to Deleuze, hinges on the way that the two principles, experience and habit, are articulated. We have already noted that a pragmatist ontology of habit depends on the rejection of the atomized material of experience postulated by Hume in favour of an extension of habit beyond its role as a mere agent of composition to the status of motor of individuation. Leaving aside James's preoccupations with associationism at the strictly psychological level, we should remark the importance of his definition of beings as 'bundles of habits'.<sup>24</sup> Defined from the vantage point of a pragmatist primacy of action, beings are no longer individuated by essences, but by the assemblage and articulation, both spatial and temporal, of their patterns or regularities of activity. Once again, habit is grasped both from the side of a defining state (the habit 'possessed' or 'possessing' an entity) and by the very process of modification (or habituation) to which this state has given rise. The relationship between law and individuation, as will become clearer in our investigation of Peirce, is considerably transformed. An individual is no longer an instance covered by a law; rather, it is habit itself, as a generality of action, that constitutes at the same time both law and individual in their relative constancy.

The explicit functioning of habit at the organic level thus becomes a matter of degree, expelling any notion of a stable frontier between the domains of being. The organic is 'merely' (in fact, considerably)



more susceptible to habituation, it is structurally open to transformation, in other words, it is *plastic*. As James writes:

*Plasticity*, then, in the wide sense of the word, means the possession of a structure weak enough to yield to an influence, but strong enough not to yield all at once. Each relatively stable phase of equilibrium in such a structure is marked by what we may call a new set of habits.<sup>25</sup>

The extreme consequence of this stance, only fully elaborated in Peirce's cosmogony (and to a lesser extent in James's own *A Pluralistic Universe*) is that far from consisting of a modification that happens *to* an individual, which would then endure like a substantial kernel of permanence beneath the more or less adventitious effects of habit, beings are indeed *nothing but* relatively stable 'bundles of habits'. Structure and genesis here are in principle indiscernible, though, given a certain temporal breadth, they might appear to us as separate factors. Turning to the functioning of the nervous system, for James this image of habit provides a way of thinking the inscription and transformation of behaviour as effectuated by the formation of neural pathways. Once again, repetition and continuity account for the ambivalence of a more precise and intense action, on the one hand, and a narrower, more unconscious perception, on the other. Individuation by habit thus appears as an essentially conservative process which, in evolutionary terms, provides for the adaptation of a being-of-action to external circumstances and stimuli. Both the generality or regularity of the schemata of action and the intense narrowness of perception are thus accounted for. Yet there remains the question of the *new* habit, of what counters the utilitarian refinement with which continuity and repetition modify a material entity. We encounter here the question of *chance*, of novelty within genesis, which for pragmatists such as James and Peirce was always entangled with the entropic view of nature so prevalent at the time.

James's crucial contribution is to pass from a perspective which, still bound to the method of analogy (from psychic experience), would see habit as second nature – as a sedimented result either of the intentions of will or the efforts of desire – to the notion of habit as first nature, as a method of nature that would produce both relatively individuated entities ('bundles') and those regularities, actualized within them, that we call laws. Just as in Nietzsche's treatment of Kant, it is a question of foregrounding a non-representational genesis of intellect and suspending the tracing of production from the reflexive parameters of common

sense (and *a fortiori*, any *analogical* use of habit) in order to inquire into the obscure, non-apparent processes of the intellect's heterogenesis.

James's insistence that *the genesis of the intellect is not itself intellectual* also lies at the heart of his attack on any associationism that would give priority to atomic ideas and their combination in the fashioning of mind. James's philosophy of habit thus pushes him towards a sort of *generalized connectionism* in which habit – covering the processes of iteration, repetition, continuity, canalization, and so on – is conceived as the motor, itself subject to modification, of becoming and individuation. However, as James's own vacillations regarding associationism might indicate, and due to his predilection for scientific and ethical questions over ontological ones, he is far from giving the concept of habit the consistency and scope that its assumption into an ontology of anomalous individuation requires. For this, we must instead turn to Peirce.<sup>26</sup>

### 4.3 Chance, law, habit (the *Monist* papers)

The notion of habit plays a crucial role in many of Peirce's writings, functioning as a privileged point of intersection for his innumerable and often divergent speculative pursuits. Above all, it defines his attempt to ground his logic of inquiry – founded around the procedure of *abduction*, or hypothetical reasoning – in a pragmatist ethics of the fixation and critique of *belief*. In Peirce, the classically pragmatist definition of knowledge in terms of its practical embeddedness and efficacy finds its minimal matrix in this lapidary definition: 'what a thing means is simply what habits it involves'.<sup>27</sup> This epistemic dimension of Peirce's concern with habit is not, however, what shall preoccupy us here. The importance of Peirce's thought for our overall theme lies instead in two corollaries of this pragmatist theory of habit as meaning: (1) Peirce's attempt to produce a speculative evolutionary cosmogony<sup>28</sup> that would exhibit the role of habituation in the ontogeny of the universe, supporting the thesis of a convergence between the logic of inquiry and the nature of becoming, or the becoming of nature, itself; (2) the manner in which the concept of habit is enlisted for the sake of a revival of Scotist realism, with the concomitant reappraisal of the problem of individuation as the chief point of contention between realist and nominalist doctrines.

Evolutionary cosmogony was the object of Peirce's draft project for a book to be entitled *A Guess at the Riddle*, aimed at complementing his researches on the logic of inquiry with a metaphysics that would exhibit

in detail the operations of the categories of Firstness, Secondness, Thirdness within all domains of being, thus producing a full-bodied philosophical architectonic.<sup>29</sup> Whilst the book itself did not appear, between 1891 and 1892 Peirce did publish a set of five essays in the journal *The Monist*, delineating the principal traits of this project. It is to these that we shall turn to assay Peirce's own contribution to the problematic of habit and individuation.

Peirce is persuaded of the need for such a cosmogony by a reflection on the relationship between philosophy and scientific law. Like Ravaisson before him, he is concerned with demoting the doctrine of mechanical necessity to a 'regional' status. This is in turn driven by a desire to defend the ontological consistency of hypothetical knowledge, as well as by something akin to a primordial faith in the sheer evidence of ontological diversity. As Peirce writes in 'The Doctrine of Necessity Examined' (the second of the *Monist* papers): 'Everywhere the main fact is growth and increasing complexity'.<sup>30</sup> Convinced that the unswerving rule of physical laws is unable to account for this 'ur-diversity', Peirce turns to evolution to provide what laws themselves cannot offer, an account of their own generation and of their merely approximate sway. Accordingly, the speculative proposal that defines this cosmogony is that of 'a natural history of laws of nature'.<sup>31</sup> The inversion is crucial. For Peirce it is uniformity or regularity itself – as well as deviations from it – that must be accounted for, not mere isolated facts. Far from enshrining laws as the transcendent *principles* of explanation, they must be accounted for in turn, and the only way of doing this is by tracking their genesis. Thus Peirce writes in a crucial passage:

Uniformities are precisely the sort of facts that need to be accounted for ... Law is *par excellence* the thing that wants reason ... Now the only possible way of accounting for the laws of nature and for uniformity in general is to suppose them the results of evolution. This supposes them not to be absolute, not to be obeyed precisely. It makes an element of indeterminacy, spontaneity, or absolute chance in nature. Just as, when we attempt to verify any physical law, we find our observations cannot be precisely satisfied by it, and rightly attribute the discrepancy to errors of observation, so we must suppose far more minute discrepancies to exist owing to the imperfect cogency of the law itself, to a certain swerving of the facts from any definite formula.<sup>32</sup>

According to this thoroughgoing evolutionism, evolution *itself* precedes and produces the apparently deterministic functioning of mechanical

laws, constituting their ultimate horizon. Yet, for this to be the case, two elements must be postulated besides, or rather beyond, law: chance and habit, or the swerving of the facts and the emergence of uniformity.

In the final analysis Peirce's concern is with the genesis of regularity. Arguing that mechanical laws that suffer no exceptions are unable to account for the diversity of phenomena, and *a fortiori* for their own functioning, Peirce posits both a chance beginning (*of* the evolution of laws) and a continuous irruption of chance (*into* the evolution of laws).<sup>33</sup> This is the core tenet of the doctrine he dubs *Tychism*. Whilst Peirce does entertain at least three versions of evolutionary theory – Darwinian, Lamarckian, and catastrophist<sup>34</sup> – his abstract metaphysical model, engaged in a speculation about genesis *per se* that goes far beyond the confines of customary biophilosophical hypotheses, synthesizes them all. This overarching cosmogonic model, opposed to the conservative and absolute character of mechanism, is founded on the idea that the 'origin' of regularity is a chance occurrence, and that this occurrence is itself devoid of any law-bound explanation, taking place at some indefinitely remote point in the past and accumulating further regularity by a process of habituation. Disputing a mechanical conception of evolution, Peirce remarks that 'the principle of evolution requires no extraneous cause, since the tendency to growth can be supposed itself to have grown from an infinitesimal germ accidentally started'. This postulate entails that what precedes regularity is a 'primeval chaos' or 'chance-medley', which 'precedes all synthesis and all differentiation'.<sup>35</sup> As we shall see, this groundless ground – or, to anticipate Simondon, this *preindividual field* – of the evolution of regularity is linked to the notions of potentiality and spontaneity that typify Peirce's singular take on the philosophy of production or genesis.

In his abstract cosmogonic schema, envisaged as the speculative armature for specific inquiries into the origins of regularity within the various sciences, Peirce introduces the law of habit as the medium or operation allowing us to pass from a hypothetical 'chance-medley' to a consistent and differentiated universe. Once again, the key term is *regularity*, through which Peirce considers both laws and law-bound existents (individuals) as (abstract) extremities of a concrete process of habituation. Just as a law is nothing but a regularity evolved to the point that it has almost entirely inhibited the irruptions of chance, so an individual is a 'bundle of habits' (Peirce makes use of the same expression as James), stabilized by habitual patterns of relation and reaction with its environment: 'The existence of things consists in their regular behaviour. ... Not only substances, but events, too, are constituted by regularities'.<sup>36</sup> Habit is thus the

concrete middle term, the ontological operator, between, on the one hand, a hypothetical state of pre-evolutionary indifference and, on the other, a situation of law-like regularity embedded in habituated systems which are defined by networks of active, or practical relations.<sup>37</sup>

Habit actually plays a greater role here than in Ravaisson, who presents it as a means to intuit, by means of analogy, the sedimentation of desire into being. Neither brute material repetition nor the method through which intention passes into automatism, Peircean habit is an iterative procedure in which chance is captured by, or 'canalized' into, regularity, and in which regularity itself is always prey to the novelty-inducing irruptions of chance. This method of nature by habitual iteration is very close to what the Hungarian thinker György Kampis, in the context of his general theory of temporally developing systems, has termed *recursive evolution*. This is a process whereby 'new forms can feed back to the system by setting new conditions for subsequent evolution', such that 'evolution should be seen as a process that is its own product'. In recursive evolution, 'whenever a solution is achieved a new task is also defined.'<sup>38</sup> A comparable model is at work in Peirce's approach to evolutionary explanation. Kemp-Pritchard notes that Peirce's view of evolution 'emphasizes genesis rather than the product of genesis', and that its stages present 'a move from unactualized possibility to tychistic instantiation, which is followed by the incorporation of that distinctive instantiation into an altered potentiality for further development.'<sup>39</sup> This model is in a sense the full deployment, at the level of a speculative cosmogony, of the paradox of habit that Deleuze encountered in Hume. Whilst maintaining many of the invariants of the basic phenomenology of habit discussed above, the conviction that habit *qua* generalizing procedure can be understood as the very motor of all activity, be it material or intellectual, arguably endows Peirce's proposal with a scope absent from other treatments of the concept.

Leaving aside for the time being the effects of this link between ontology and generality upon Peirce's assessment of Scotus's realism of essences and theory of *haecceity*, we must pause to consider the status of individuality within his cosmogony. After all, the foremost concern of the *Monist* essays seems to be with the kind of generality at work within a 'natural history of laws'; that is, with something like an ontogeny of legality. And yet, as I have already intimated, the concept of regularity covers both laws *and* entities. What then is an individual, when considered purely as regularity or habit? Firstly, it is essentially a *relational* entity, nothing but the relative stability and permanence of a

complex of relations.<sup>40</sup> The thrust of Peirce's argument does not lie, as many commentators have claimed, in his denial of the existence of 'absolute individuals', but is instead to be sought in his reduction of individuality to a dynamically evolving feature of the relations between systems or patterns of behaviour. The 'logic of relatives' forwarded by Peirce is based on this conviction that individuality, together with its properties and its categorial subsumption (its 'participation' in universals or real essences), is founded on systemic relational features. As he writes: 'where ordinary logic talks of classes the logic of relatives talks of systems. A system is a set of objects comprising all that stand to one another in a group of connected relations.'<sup>41</sup> As Raposa comments: 'Peirce seemed to regard monadic predicates as themselves being relatives of a degenerate sort, and he treated classes as being degenerate forms of systems.'<sup>42</sup> This view of logic translates directly into an ontology: individuals are regularities and the laws they might be said to 'instantiate' are nothing but higher order generalities, or metasytemic regularities. Habits are nested in other habits of 'higher orders', and a law is but a greater scale of regularity as perceived from the point of view of a lower order.<sup>43</sup> Though in other writings Peirce often appears to defend a gap between the level of law and that of individuality, the emphasis put on habit in the *Monist* papers, and its 'thoroughgoing evolutionism' cannot but reduce the question of individuality to that of dynamic relational stability (the 'bundles of habits') and to undo any notion of law as the instantiation of universality into a particulate entity.<sup>44</sup>

This critique of a model of simple instantiation governing the relationship between invariable laws and thoroughly determinate individuals is founded, as we have noted, on Peirce's philosophy of habit. It is also behind his reformulation of the scholastic problem of universals and his defence of an 'extreme realism'. This extreme realism consists in giving full rights of ontological citizenship to universals or real essences, now understood as habitual dispositions, as the real regularities out of which the evolutionary universe is woven. As Raposa has shown, the primacy of the relative, which is pretty much axiomatic for Peirce, profoundly transforms the problem of universals, just as it had recast, through chance and habit, the problem of natural laws. Whilst affirming with Scotus that generality, the *natura communis*, is real as well as not being numerically one (a habit can indeed be considered as both less than and more than one thing), Peirce wishes to transform it into an evolutionary and relational category. Generality is no longer indifferent to its own becoming and individuation, being enmeshed in processes of iteration or recursive

evolution. It is also not exempt from relationality, as the very fabric of its development is only afforded by the continuity of relations.

Peirce presents an option foreign to the scholastic debates: that of a universal that neither inheres in singular things, precedes them, or is drawn *from* them. Instead, Peirce's 'habitual' universal is *immanent* to the stability of relational patterns – it is not *in re* but *inter res*. Moreover, the *res* themselves draw all their consistency, their capacity to be relatively individuated or discerned, from the stability of the relational networks. Peirce's habit refuses the proposition of an individuation by irreducible *haecceity*, as well as the formal difference between *natura communis* (generality) and *haecceitas* (individuality) still present in Scotus. In part, this is because it positively recasts the ambivalence noted above: it is both process and result. When Peirce objects that Scotus remains too nominalistic, he is referring precisely to the way that the processual character of habit allows us to bridge and dissolve the distinction between universals and their singular instantiations, by considering these universals as nothing more than large-scale regularities and their 'instantiations' as nested regularities, themselves held together by networks of habitual relations. In the final analysis, laws or universals are but the evolutionary result of the stabilization of relations, and individuals the hardened – but nevertheless provisional – nodes of these relations. Moreover, the refusal of the residual nominalism present in the theory of *haecceity* is inseparable from Peirce's abiding concern with producing a philosophy that would assume the ultimate facts of variability, heterogeneity and chance. Although, unlike Scotus's *natura communis*, Peirce's habits are mutable, they can never be exhausted in their performances or by an enumeration of their cases. They are bathed in a universe defined by its connectedness. Likewise, if we consider individuals themselves as habitual systems or relational nodes, as opposed to discrete, atomized entities, we can see how their potentiality, while constrained by relation, can never be entirely delimited.<sup>45</sup> In other words, potentiality cannot be removed from the becoming of the relations which make up the irreversible and continuous dynamics of cosmogony.

In order to ground his speculative cosmogony and the central role played by the law of habit in the genesis of regularity and generalization, Peirce turned to a pivotal question in the ontology of relation. If the recursive principle of habit is to account for the capture of chance and for the modifications of being appearing as regular laws and beings, then the ontological reality of relation must be accounted for, as well as the potentiality – what Peirce refers to as the *Germinal Being* – that lies at its basis. What is at stake is *continuity*.

#### 4.4 'Possibilities beyond all multitude', or, Peirce's Continuum Hypothesis

The role of continuity is to address both what lies *before* the accidental 'jump start' of habituation in the genesis of regularity (chaos, germinal being, pure possibility) and what lies *between* any habitually related individualities. Or rather, to show how the continuity of relations that allows for the spreading and generalization of ideal and material habits is ultimately grounded on a fundamental 'aboriginal continuum', on both an evolutionary and a mathematical register. For Peirce, 'relations are possible only where continuous connections exist'.<sup>46</sup> It is on the basis of these continuous connections that chance occurrences and material regularities evolve into bundles or systems of habit, whether these be considered as laws or individuals. As in James, the nemesis is any psychological or metaphysical associationism that pretends to construct individualities (thoughts, organisms, entities) out of mere atoms of existence. If being is to be considered primarily in terms of the genesis of regularities, relations must have priority over terms. As we have already noted, this is a fundamental postulate of Peirce's logic of relatives. With this steadfast refusal of all doctrines based on a primacy of unrelated individuals – doctrines that Peirce classes under the umbrella term of 'nominalism' or 'Ockhamism' – comes the affirmation of continuity as the fundamental category of being, an affirmation that takes the doctrinal name of *synechism*.

We can isolate three levels within Peirce's concept of continuity: (1) the abstract ontology of the mathematical continuum; (2) the potential continuity of germinal being in evolution; (3) the relational continuity of habituated systems. We will deal primarily with the first, hoping that its relationship to the other two should be clear from the discussion in the previous section.

Whilst the motivation for the doctrine of continuity lies in the need to provide an ontological foundation for the relational component of his cosmogony of habit, Peirce's inspiration is not to be found in evolutionary but in mathematical ontology, first in Kant and then in set theory. The Kantian source is the argument against the notion – based on the principles of contradiction and the excluded middle – that whatever exists consists of individuals. The Kantian definition of the continuum, as an infinitely divisible 'something' all of whose parts are parts of the same kind, suggested to Peirce the notion of the 'conceivability of a world without [atomic] individuals'.<sup>47</sup> Yet it was only his work on set theory that provided him with a concept of continuity that could complement his cosmogonic speculations. In order to think the determinability of



the pre-evolutionary chaos into habitual individualities and the laws they embody, Peirce wished to move beyond the merely negative divisibility of the Kantian continuum, and to attain a continuity that could serve as the preindividual or potential ground for the individuation of habits. Kant's merely regulative proposals only represented a formal or analytical potentiality. They never attained that notion of pure potentiality, of germinal being, demanded by Peirce's general theory of evolution. In his own image: 'Breaking grains of sand more and more will only make the sand more broken. It will not weld the grains into unbroken continuity.'<sup>48</sup>

Instead, it was out of a far more abstract and fiercely formalistic doctrine, that of set theory, that Peirce drew the principal features of the ontology of continuity required by his cosmogony. Developing his own theory of transfinite sets (or *abnumerals*) Peirce proceeded in parallel with Cantor, establishing, by means of the determination of power sets, a hierarchy of infinite sets, or *multitudes*, with ever greater cardinalities, going beyond denumerable infinities to non-denumerable or *postnumerable* ones. As Gordon Locke comments, Peirce's interest did not lie so much in the mathematical consequences of this set-theoretical discovery (the recognition of the difference between denumerability and non-denumerability) as in its metaphysical ones. Going beyond the mathematically legitimate inferences of the theory of transfinites, Peirce posits a sort of hyperinfinite, an 'aggregate of abnumerals' or 'supermultitudinous collection', which is not just non-denumerable but wholly divested of any atomicity; that is, purely potential. Here is the key passage, from his lecture 'The Logic of Continuity' (1898):

That which is possible is in so far *general*, and as general, it ceases to be individual. Hence, remembering that the word 'potential' means *indeterminate yet capable of determination in any special case*, there may be a *potential* aggregate of all the possibilities that are consistent with certain general conditions; and this may be such that given any collection of distinct individuals whatsoever, out of that potential aggregate there may be actualized a more multitudinous collection than the given collection. Thus the potential aggregate is with the strictest exactitude greater in multitude than any possible multitude of individuals. But being a potential aggregate only, it does not contain any individuals at all. It only contains general conditions which *permit* the determination of individuals.<sup>49</sup>

We thus pass from mere divisibility to a purely determinable or potential 'supermultitude'. This idea, 'the idea of possible variations which no

multitude of existent things could ever exhaust',<sup>50</sup> is the counterpart of the infinite variability that Peirce regarded as the ultimate fact about the universe, arising out of the play of chance and regularity as mediated by habit. The actualization of this potentiality, conceived under its mathematical formalism rather than in its evolutionary dynamics proper, is commanded by Peirce's resuscitation of the concept of *infinitesimal*. Though Peirce does speak of possibility, the hyperinfinite and non-individuated character of the continuum is incompatible with any concept of the possible which would anticipate the nature of its own actualization, turning generality into something that precedes and subsumes individuation. On the contrary, the process of generalization, of the continual and irreversible actualization of the continuum, is nothing but the manifestation of the relative, habitual stabilization of a primordial potentiality, and remains present throughout the processes of habituation.<sup>51</sup> This is explained, once again, by the primacy of relations affirmed by Peirce. Infinitesimals themselves – as determinable infraindividuals, or what Deleuze, following Simondon, would term preindividual singularities – offer the mathematical formalization of this primacy. As Locke notes, they are both non-determined and determinable, they 'accommodate both universality and (potential) individuation'.<sup>52</sup> It is their connectivity, their strictly *relational* status, that accounts for the actualization of the continuum into relatively determinate individuals. Infinitesimals promise a way of thinking individuation on the basis of a preindividual potentiality, without immersing it in indeterminacy or indifference. They also provide a formal counterpart, within mathematical ontology, of the theory of recursive evolution embodied in the cosmogony of habit. On both these registers, the issue is not one of instantiation. The potentiality of germinal being, whether mathematically or cosmogonically considered, cannot anticipate its individuations. The latter take place through the relational actualization (in bundles of habits or connections of infinitesimals) of what, within the continuum, remains preindividual. These individuating relations constitute relative breaks in the continuum and transform the conditions of further individuations, manifesting that element of recursiveness and irreversibility that makes this notion of individuation ineluctably temporal. The continuum is not instantiated, but actualized with a difference.<sup>53</sup> This is why no law can contain Peirce's possibility, why the latter remains, as he puts it, beyond all multitude. Yet this iterative process also seems to condition further individuations in an apparently entropic manner, in accordance with the conservative character of habit. Is there a contradiction between these two aspects of Peirce's

philosophy, unlimited possibility and entropic conservation? Once transposed from the mathematical to the cosmogonic register, is the process of habitual individuation contrary to the novelty and variability that Peirce ascribes to the universe as such? Is the spiritualist continuum at odds with the mathematical one?

#### 4.5 The return to teleology and the temptations of spontaneity

We have inquired into the concept of habit in order to assess to what extent it is capable of assuming and furthering the challenge of a non-Kantian model of individuation, the sort of model that Nietzsche had problematically inscribed in his concept of a 'method of nature'. With Peirce, we have encountered the full metaphysical deployment of habit within an evolutionary cosmogony, as well as an ontology of relation and continuity. Especially in its characterization of individuals as nodes within relatively stable relational networks, Peirce's model also provides a promising response to the sort of problems arising out of the rubble of the Kantian theory of the organic in Nietzsche's 1868 notes, the kind of problems gathered under the heading of 'life as infinite multiplicity'. With its evolutionary approach to the production of forms, its affirmation of chance as an ineluctable, if not primary, dimension of becoming, and its mathematical ontology of a hyperinfinite continuum, Peirce's philosophy offers the rich outlines of an alternative approach to the relationship between potentiality, relation and individuation, transversal to the dichotomy of autonomous and heteronomous modes of individuation whose Kantian matrix we identified in Chapters 1 and 2.

Whilst one should not underestimate Peirce's contribution to transforming habit into a novel operator within the ontology of individuation, there remain some symptomatic problems with the approach that came to be crystallized in the *Monist* papers. I say 'symptomatic', because the two most prominent instances of the problems remaining in Peirce's otherwise admirable construction are both related, from our vantage point, to the conceptual matrix we isolated in our discussion of the anomalies of the organic. It exhibits, at the very height of the speculation about the force of habit as an ontological 'principle' of individuation, the dogged persistence of the 'subterranean' legacy of the third Critique. These two instances are those of *teleology* and *spontaneity*. I shall deal with them briefly here, and refer the reader back to the arguments in Chapters 1 and 3 for the first, and forward to the critical discussion of Deleuze's Bergsonism in Chapter 6 for the second.

The role of teleology is clearest in Peirce's writings on classification, above all in the essay 'On Science and Natural Classes'. In that piece, primarily preoccupied with issues of biological taxonomy and, derivatively, with the question of the classification of the sciences themselves, Peirce applies his 'Scotism' regarding universals to a defence of the reality of classification. In accordance with the guiding theses of pragmatism, this reality is testified to both by the usefulness of classification and by its capacity to capture something like a history of use; in other words, to grasp those dispositional structures or final causes that account for the reality of a class. As Peirce asks: 'What if we try taking the term "natural" or "real" class to mean a class all of whose members owe their existence as members of the class to a common final cause?' By defending this position, Peirce contravenes the aleatory figure of evolution of the *Monist* papers. It is hard to see how that view could be entirely consistent with a stance on natural classes that regards evolution as 'nothing more nor less than the working out of a definite end'.<sup>54</sup>

But as Peirce repeatedly notes, this 'driven' character of the evolutionary process does not entail the existence of purpose exhibiting a cognitive or intentional character.<sup>55</sup> There are no definite intentions in nature, only the effective sway of generality. Once again, Peirce shows that his abiding concern lies in an 'extreme realism' about generalities. The counterpart to this singular variant of realism is 'objective idealism'. Faithful to an Aristotelian schema, Peirce wants to think the conjoined action of the final and the efficient. Final causes are ideal regularities – or 'functional structures', to adopt a more contemporary scientific vocabulary – that provide the parameters within which the 'blind' trajectories of efficient causation operate. Final causes are ultimately *real ideas*. (Peirce is certainly more inclined to uphold the reality of ideas than the reality of things.) It is not just the effective reality of classes that is to be sought in these general ideas, but the possibility behind the genesis of its future members. Whence the definition of a natural class as 'a family whose members are the sole offspring and vehicles of one idea, from which they derive their peculiar faculty', as well as the assertion that 'potentiality is an affair of ideas'.<sup>56</sup> Whilst apparently upholding a genealogical criterion for classification legitimated by evolutionary theory, Peirce effectively reverses it, replacing the recursive method of nature introduced in his cosmogony with a functional-ideal, that is to say teleological, method of mind-nature. Thus, he writes:

All natural classification is then essentially, we may almost say, an attempt to find out the true genesis of the objects classified. But by

genesis must be understood not the efficient action which produces the whole by producing the parts, but the final action which produces the parts because they are needed to make the whole. *Genesis is the production from ideas.*<sup>57</sup>

It is no accident that this defence of the ideality of genesis, which finds Peirce so close to the position of Ravaisson, goes hand in hand with the relative absence of the concepts of habit and chance from the discussion.<sup>58</sup> Not only can chance, in Nietzsche's words, create the most beautiful melody, but the key features of Peircean habit are not amenable to transposition onto the old dichotomy of the efficient and the final. In this respect, by not taking his own insights seriously enough – whereby 'habit as final causation and habit as efficient causation are two ways of looking at the same thing' – Peirce, in the final analysis, remains in the grip of the Kantian heritage in the philosophy of individuation.<sup>59</sup>

This can be ascribed to the strongly anti-mechanist or anti-materialist character of his philosophical project. We have already remarked upon this both in Peirce's attack upon any idea of evolution bound to the exact governance of law, as well as in the opposition to atomistic and associationism determinations of the law of habit. We can also add Peirce's equation of the mechanist philosophy with the conservative thermodynamic model, and his contention that the latter was unable to deal with the dynamic realities of habitual becoming.<sup>60</sup> The limitations placed by the mechanism of his day upon matter's capacity for organization led Peirce, once he had identified those recursive operations of becoming that mechanism could not account for (and which it would be futile to demand it deal with), to postulate that they are indeed phenomena of a mental order, whose material manifestations are but 'degraded or underdeveloped forms of psychical events'.<sup>61</sup> We thus return to a variation on the philosophy of spontaneity of *De l'habitude*. Yet Peirce's equivocation lies in the affirmation of 'chance-spontaneity', that aboriginal potentiality from whose inexhaustible continuum all modification is drawn. What is the nature of this spontaneity? Is the aleatory character of evolution not inimical to any view of development as presided over by a 'living spontaneity'? Once we have set out the operations of habit and weighed the force of iteration, need we really postulate some inaugural agency or force behind the germination of being, behind that diversity and heterogeneity that all of Peirce's philosophy attempts to confront and assume? Does chance not free us from the cognitive analogies of spontaneous activity? Though originating in the Peircean problematic, these are questions that will only be answered

as we move through Simondon and Deleuze. Even within Peirce, however, we are not accorded any univocal responses. After all, the 'ideality' and 'spontaneity' that he upholds are highly idiosyncratic. The first pertains to the ideas that themselves both constitute and exceed the minds and brains that they might come to inhabit. The second is a spontaneity that appears on a number of levels as radically impersonal, indiscernible from chance at the point in which it rejoins the cosmic chaos of potentiality.

In the next two chapters, I shall show that what hampers the Peircean formulations of the problems of habit and individuation – besides the adverse effects of the trenchant anti-mechanism that so clearly 'dates' his philosophy – is his conviction that the character of becoming demands that development and individuation move from homogeneity to heterogeneity, in other words that potentiality *precedes* difference. In the last instance, the principle of individuation is subordinated by Peirce to a 'principle of absolute, creative spontaneity or possibility, without which phenomena like variety, heterogeneity, differentiation, specification, and growth cannot be explained'.<sup>62</sup> In the remainder of this work, on the contrary, we will attempt to investigate the possibility of thinking both an *individuation without a principle* and a *difference without spontaneity*.

# 5

## *Tertium Datur?* Gilbert Simondon's Relational Ontology

### 5.1 Relation: disparation versus symbolism

As was noted in the introduction, the interpretative schema adopted in this book to delineate what we referred to as the ontology of anomalous individuation is largely indebted to the work of Gilbert Simondon. Without his contribution it would not have been possible to isolate those critical junctures in the development of post-Kantian thought that reveal the insistent presence and considerable repercussions of the problem of individuation. By extending the scope of the critical component of Simondon's project to encompass the investigation of relevant nodes in the philosophies of Kant, Nietzsche and Peirce, we have tried to show how the crucial prescription that underlies his thinking – *to know the individual through individuation rather than individuation through the individual* – can be put to work, how it can be used to expose philosophical problems and trajectories that would have otherwise remained obscure.<sup>1</sup> In Chapters 1 and 2, this schema was enlisted to demonstrate how the criteria for individuality postulated by Kant sustain a dichotomy between autonomous and heteronomous modalities of individuation, as well as how a shift from the concern with intelligibility to a consideration of genesis and operation led Kant to enrich his account of the production of individuality and to postulate a transcendental-material continuum in his late speculations on the ether. In Chapter 3, Nietzsche's destruction of Kant's determination of the organic allowed us to underscore the relationship between the idea of life as infinite multiplicity and the emergence of the anti-representationalist problematic of the genesis of the intellect. Finally, in Chapter 4 we encountered a modality

of individuation that cut through the Kantian antinomy between autonomy and heteronomy: Peirce's notion of habit as a general individuating operation. These archaeological forays have hopefully validated the Simondonian schema for a critical history of the problem of individuation, in a manner going beyond the mere illustration of his theses. More specifically, I have attempted to show how elements of Simondon's project can be fruitfully applied to discern moments of exemplary importance in the genealogy of philosophical modernity. Three aspects of this project have been pivotal to our approach: the critique of principles of individuation as parasitic on pre-defined models of individuality; the idea of operation as the hidden underside of philosophical theories of individuation; and the foregrounding of a differential ontology based on the processual distinction between the preindividual and the individuated. Rather than reiterate the importance of these aspects and examine their place within Simondon's own work – a task which for the reasons just adduced would be somewhat redundant – we wish to approach this work by examining it from the angle of its conception of *relation*.

As several recent commentaries testify, the question of relationality in Simondon goes to the heart of his philosophical project, revealing an ambivalence whose resolution is decisive if we wish to assess the contemporary promise of his approach to the question of individuation. Needless to say, the importance accorded by Simondon to processes of individuation *over* constituted individualities cannot but profoundly affect the ontological status of relation. If philosophical interrogation regarding individuals is to be predicated on tracking the operations that give rise to and maintain them in being, relations can no longer be primarily conceived as occurring *between* constituted terms, whether as merely phenomenal manifestations that ultimately inhere in the terms or as effective connections and disjunctions existing separately from them. Simondon extracts relations from the static order of predication and intelligibility which subtends the idea of a world of individuals, in order to present relation itself as an ontogenetic factor. However, given the prescriptive premise of his philosophy it is not possible simply to speak here of a primacy of relations. Rather than merely inverting – in a manner that would prove analytically nonsensical – the classical or Leibnizian thesis whereby relations find their sufficient reason in constituted individuals, from which they are then deduced or inferred, Simondon proposes we turn to a domain – that of the preindividual – where neither relationality nor individuality can be branded with the fixity that would allow them to be subjected to a logic of predication.



To comprehend the genesis of individuals on the basis of their emergence out of a reality which itself cannot be decomposed into individuals is therefore inseparable from the task of thinking the genesis or constitution of relation itself.

Remarking upon the absence of an ontological vocabulary within the tradition that would permit us to lay hold of being in a state irreducible to individuality – that is, the absence of a thought of becoming that would not be the mere obverse of atomized representation – Simondon turns to the concept of *metastability*. In referring to preindividual being as ‘metastable’, Simondon wishes to advance the idea that, ‘prior’ to individuality, being is affected by inconsistency, populated by divergent tensions, and pregnant with incompatible potentials.<sup>2</sup> As Combes elucidates, a

physical system is said to be in metastable equilibrium (or false equilibrium) when the least modification to the parameters of the system (pressure, temperature, etc.) is sufficient to break the equilibrium of the system ... Before every individuation, being can be understood as a system that contains a potential energy. Even though it exists *in actu* within the system, this energy is called potential because in order to structure itself, that is, to actualize itself according to certain structures, it needs a transformation of the system. Preindividual being and, in a general way, every system that finds itself in a metastable state, contains potentials which, because they belong to heterogeneous dimensions of being, are incompatible.<sup>3</sup>

On the basis of the anti-Leibnizian articulation of relationality and individuation it shares with Peirce, we can therefore ask whether this proposal of a metastable individuation is still prey to the problems that afflicted the latter’s notion of a habit-system. The issue, which we will attempt to develop in this chapter, is whether shifting the focus from the atomized individuality of unit-terms to the enveloping individuality of relational systems really permits us to evade the traps and constraints of the Kantian legacy in the philosophy of individuation.

Whilst it is yet to be individuated, preindividual being can already be regarded as affected by relationality. This preindividual relationality, which takes place between heterogeneous dimensions, forces or energetic tendencies, is nevertheless also a sort of non-relation: heterogeneity as the anoriginary qualification of being. Being is thus said to be *more-than-one* to the extent that all of its potentials cannot be actualized at once. For Simondon, there is thus a kind of primal excess or surplus in being.

This is why individuation is to be thought along the lines of the resolution of a problem, of the integration of a differential reservoir of potentiality which as such can neither be experienced (as an object) nor materialized (as a thing). In this sense, to relate – orders of magnitude, differences of potential, and so on – simply *is* to individuate. A primacy of relations can therefore be identified in Simondon's doctrine to the extent that it conceives preindividual being as characterized by an 'original duality' and by the 'initial absence of interactive communication'.<sup>4</sup> This duality must not be understood as a duality of principles, but rather as a sort of originary, an-archic difference. Simondon's ontology of relation depends on the refusal of the thesis that conceptual dichotomies – matter and form especially – can be used to account for the genesis of individuals. Real relations are those relations that co-emerge with their terms. They are operations that integrate differences, 'not the simple relation [*rapport*] between two terms that could be adequately known by means of concepts, inasmuch as they would have an effectively separate existence.'<sup>5</sup>

Rather than the *substantial* support of relations that would inhere within it, (preindividual) being is defined as affected by *disparation*, that is, by the tension between incompatible – as yet unrelated – dimensions or potentials in being. As I hope to show in the discussion of information and interaction in the next two sections, this concept of *disparation* is of singular importance if we wish to comprehend the radical contribution that this philosophical project can make to contemporary debates on individuation. The concept derives from Simondon's treatment of theories of perception:

There is *disparation* when two twin sets that cannot be entirely superimposed, such as the left retinal image and the right retinal image, are grasped together as a system, allowing for the formation of a single set of a higher degree which integrates their elements thanks to a new dimension.<sup>6</sup>

By integrating or resolving preindividual difference, individuation creates a relational system that 'holds together' what prior to its occurrence was incompatible. For Simondon, the wealth and eventual propagation of an individuated system is measured by its capacity to *compose* as many differences as possible, to maintain the greatest degree of metastability compatible with its own perpetuation. Thus, the form generated by the relative and provisional resolution of a disparity in being cannot be thought of as a virtual totality lying in wait for its actualization (as in Gestalt theories), nor as the mechanical result of an iterative

composition of perceptual units (as in associationist theories); it is a real solution, the invention of a compatibility between potentials or dimensions of being that are in excess of unity. In this respect, one of the key characteristics of the disparate or metastable character of preindividual being is the (non-arbitrary) multiplicity of solutions: each individuation constitutes an invention.

We can distinguish at least four varieties of relationality in Simondon's general ontological schema: (1) the 'non-relation' of disparation, defining the energetic and material tensions between incompatible tendencies within being; (2) the relation between an individual and its environment, which makes of every individuation a double or co-individuation; (3) the internal relation between an individual and its preindividual component, those unresolved differences that it carries along with it and which are periodically resolved by its continual individualization;<sup>7</sup> (4) the processual relation between a structured germ of individuality and the metastable domain which it structures by propagating or *transducing* itself. In all of these cases – which articulate distinct aspects of the ontological difference, as it were, between the preindividual and the individuated – relation is framed by the passage from disparateness or incompatibility to relative systemic consistency, as being separates itself into phases or zones of compatibility without thereby ever exhausting its potential, its excess. As Simondon writes:

it would be possible to *consider every genuine relation as possessing ontological status [ayant rang d'être], and as developing within a new individuation*; the relation does not arise between two terms which would already be individuals; it is an aspect of the *internal resonance of a system of individuation*; it is part of a state of the system [*un état de système*].<sup>8</sup>

Rather than providing the emblem of closure or totalization, relationality is thus 'the non-identity of being with regard to itself.'<sup>9</sup>

On the basis of this operational conception of relationality, which frees it from any predicative or substantial dependence on the pre-existence of the terms of relation, we can return to the ambivalences alluded to before. It is in fact legitimate to portray Simondon's philosophy as driven by a fundamentally conciliatory vision, in which the operations of individuation are sequentially ordered into progressive schemata of ever greater integration; where scales of individuation are established on the grounds of their ever increasing capacity to 'live up to' the metastable wealth of preindividual being, what Simondon refers

to as 'concrete being' and the 'primitive all'.<sup>10</sup> This explains why some of Simondon's readers have chosen to lavish so much attention on Simondon's use of the term 'symbolic'. In this perspective, the final horizon of Simondon's project would be located in the attempt to link every individual to its ultimate participation in a unified reality; in other words, to return it to the preindividual ground of its emergence.

This interpretation, undeniably corroborated by several of Simondon's own pronouncements, is nevertheless hostile to what we regard as one of the most significant contributions of his philosophy: to wit, his operational ontology of relation. The basis for a consideration of relationality not vitiated by the pre-existence of its substantial predicative support is precisely the thesis that the 'basic' state of being is one of disparation, of difference-from-itself. On the basis of this thesis, the 'thesis of ontological excess', individuation can be considered as a *constructive* operation, since every act of relating is the production of a new dimension of being.<sup>11</sup> If by symbolism we are to understand the affirmation that every individuated reality is constitutively related to a pre- or 'para-individual' one, whether this be the metastability that complex forms of individuation carry along with them or the associated environment of an individual, it is true that Simondon's conception of individuation is symbolic, faithful to the etymology of the term. Unlike in Kant's definition, however, this symbolism does not *refer* individuality to a *totality* that encompasses it. *The originary disparateness of preindividual being forbids any totalization.*<sup>12</sup> That is, whilst preindividual being may be termed 'concrete' or 'complete', it is only so to the extent that it contains an excess of potentiality which every individuation attempts to resolve. This 'completeness' does not represent a reality that could be qualified by some sort of closure, not even in a regulative understanding of systematization.<sup>13</sup> To affirm the relativity of individuation – its provisional and 'insubstantial' character – does not entail that individuality is to be related to a 'higher' or 'totalizing' reality. The differential character of preindividual being – the notion that 'Every operation, and every relation within an operation, is an individuation that doubles and dephases preindividual being' – means that every act of relating to, especially that of relating to preindividuality 'as such', is itself an individuating procedure.<sup>14</sup> What holds for the Riemannian multiplicities discussed by Bergson and Deleuze – the fact that their division is inseparable from a change in kind – also holds for Simondon's preindividual: every individuation is a real operation that transforms the complexion of being. This is also why, despite Simondon's painstakingly detailed and often persuasive depiction of a nested set or great chain of individuations

advancing towards ever greater inclusions, we think that the fundamentals of his ontology of individuation can be separated from the great cosmogonic epic that often transpires from his writings. The latter is largely to be ascribed to the normative insistence within his thought of a kind of ethics of inclusion, the utopia of a 'technical culture'.<sup>15</sup>

## 5.2 Information: critique of the code

At the antipodes of such an ethos of inclusion is the appropriation of Simondon's ontology of individuation enacted by Deleuze. Deleuze's differential ontology, as we will outline in the next chapter, can indeed be viewed as a radicalization of the ontology of disparation that is at the core of Simondon's thinking about individuation. One of the principal notions that Deleuze derives from Simondon is that of the individual as 'signal-sign system'.<sup>16</sup> A signal denotes the existence of at least two heterogeneous series or domains, conceived as a precondition of individuation. A sign is the production of a communication, or compatibility, between these heterogeneities. In this formulation, Deleuze demonstrates his awareness of the paramount significance of the concept of information for Simondon's research. Moreover, by emphasizing the productive character of this schema, whereby a sign is what individuates a system on the basis of an initial disparation, he points us to the heterodox nature of Simondon's theory of information.

Simondon's approach to information is twofold. On the one hand, he applies to information theory and cybernetics the same critical parameters that lay the groundwork for the operational ontology of individuation; on the other, he presents a reformed concept of information as the key to a philosophy that would finally give the preindividual its due. That the modern concept of information is here subjected to critique should come as no surprise. We could even say that in its most 'dogmatic' uses, whether in philosophy or science, it is the bearer of a grand synthesis of the three main principles of individuation that come under Simondon's attack: as unit-measure which atomistically composes organization and quantifies degrees of order, it mimics atomism; as an expression of the unilateral relation between model and copy, it reinstates the Platonic archetype; finally, as a source of organization which is separate from matter or 'substrate independent', it is the contemporary heir to Aristotelian hylemorphism.<sup>17</sup> In order to counter the widespread tendency to consider information as the principle of individuation that can synthesize all others, Simondon is obliged to rescue it from hypostasis and track its specifically operational reality. Or, to use a Bergsonian turn

of phrase, to move from a readymade information to information in the making. Information, above all, must not fall under the sway of that perennial gesture of hylemorphic philosophy, the 'forgetting of operation'.<sup>18</sup>

Simondon entreats us to look beyond the circumscribed validity of the mathematical theories of information – theories that seek to measure, on probabilistic lines, the effect of particulate messages passed from a sender to a receiver – and turn our attention instead to an investigation of the production, out of metastable states of incompatibility, of the 'senders' and 'receivers' of information themselves, as well as of the enveloping relational system within which such exchanges can prove efficacious.<sup>19</sup> This reconfigured concept of information – which Simondon dubs 'first information' – is thus based on the need to account for the movement from an initial 'non-relation' of disparation to the individuation of that signal-sign system wherein a genetically functional relation between separate terms could be envisaged.<sup>20</sup> Jacques Garelli has usefully summarized Simondon's concern with information as follows:

We must, from now on, conceive of information not as the transmission of a coded message – since there are yet to be formed individuals, regarding which an information could be transmitted – but, in the genetic sense, as the passage from a preindividual energetic potential to a *formation* [*mise en forme*] that is *individualizing*, and therefore *signifying*, at the same time as informing. Transduction therefore corresponds to a *phenomenon of resonance internal to a metastable system, which radiates on the basis of a preindividual potential that dephases itself at the same time that it takes hold in individualized forms.*<sup>21</sup>

It is therefore by way of an ontogenetic account of relationality, rather than an investigation of ideality and sense, that Simondon's thinking answers to Ruyer's demand: 'one should be able to reject the purely actualist and structuralist interpretation of information without being accused of admitting the arbitrary games of transcendent agents.'<sup>22</sup>

What Garelli correctly highlights in Simondon's work is the attempt to appropriate the concept of information for a consideration of ontogenesis in terms that would precede and condition the formation and circumscription of these individuated entities and quantities that go by the names *sender*, *receiver* and *code*. The real object of Simondon's attack is the hegemony of the mathematical theory of information, the probabilistic modelling of the transmission of information and the determination of measures of order ('bits'). Instead, he wishes to interrogate the ontological blind spots of those uses of information which claim that it

provides the necessary and sufficient conditions for individuation processes. Aware of the very strict criteria laid out by Shannon and Weaver for the application of information as a measure of order, understood in terms of the possibility or availability of choice, Simondon turns his attention towards the genesis of the systems of relations that constitute the formal and ontological condition for those operations which the theory of information aims to explain and measure. Like Nietzsche, then, Simondon is interested in the *genesis of measure*, and specifically in the genesis of those systems whose relations, exchanges and transformations could be amenable to measurement.

For all of its rigour when applied according to strict operational parameters, the mathematical concept of information is revealed to be profoundly lacking as an explanatory or descriptive model of ontogenesis. Prior to the individuation of those relational systems 'between' which messages can pass, it is senseless to speak of the denumerable possibilities of choice required for the measurements of information theory. Metastability and disparation, as traits of preindividual being, do not permit the sort of atomizing decomposition required by an essentially probabilistic theory. Ultimately, it is the processes of individuation that retroactively provide the distinctions which possibility and probability demand, not the latter which supply the parameters within which ontogenesis takes place. The information tracked by probabilistic theories is thus revealed as a derivative variant of 'first information', a variant that can only apply to the results of individuation when these are extracted from their active relatedness to their 'external' environments and to their 'internal' charge of preindividual potential. To the degree it takes place between two individuals whose capacities of action and possibilities of reception are fixed in advance, the relation embodied by the transmission of a coded message is thus entirely unable to exhaust the process of individuation.

To explain this shortcoming in the theory of information I turn briefly to the issue of coding. We can distinguish two complementary uses of the notion of code, the first describing a relational operation, the other functioning as a veritable principle of individuation. In the first case, coding is considered in terms of the possible relations that a given individual might entertain either with other individuals or with its environment. In this view, coding is the 'general term for the selective mechanisms of a system by which incoming materials are rejected and translated for the structure'.<sup>23</sup> In the second meaning, which is paradigmatic for the various proponents of genomic determinism, the code is both the plan and the motor of individuating processes. On the basis of

the foregoing discussion it should be evident that neither of these options could satisfy a philosopher keen to interrogate the nature of ontogenesis. If information is to be linked with the concepts of preindividuality, metastability and disparation, that is, with concepts forged in order to think *individuality* through *individuation*, the very idea of coding must be derived from operations arising from and resolving the non-relational character of the preindividual, and not vice versa. Thus, Simondon's objection to the code as a plan of organization (to anticipate this expression of Deleuze and Guattari) is that 'information is never relative to a single, homogenous reality but to two orders in a state of disparation', since it is 'never deposited in a form that could be given'. In other words, there is no *datum* or measure of information *per se*, only processes of information that resolve the disparate into systems of relationality and the individuals they comprise. As Simondon notes, 'there is no unity or identity of information, because information is not a term, it is that whereby the incompatibility of an unresolved system becomes an organizing dimension within its resolution'.<sup>24</sup> Information is understood here as the orientation or sense of individuation, not its measure or, even worse, its separate and transcendent source. Much the same can be said for the relational view of coding, the first of the two acceptations of the concept dealt with above. This is clear once we consider that the adaptationism at work in its picture of a system's space of possible relations depends on the system already being 'given' or circumscribed. In other words, both approaches to coding presuppose individuated systems enveloping within themselves the coded exchanges between senders and receivers.

What then becomes of the concept of information after the critique of individuated principles and terms (or elements) is applied to it? Once again, we are led to the question of the emergence of relation (intra- or inter-individual) out of the non-relation of disparation; that is, our attention turns to the *event* of individuation.<sup>25</sup> In accordance with Simondon's prescriptions, this event cannot be the punctual fact of transmission or transcription, it cannot relate to an information signal and its (intrinsic or extrinsic) coding.<sup>26</sup> It is necessary to

maintain the difference between information proper – which is the way of being of a system that supposes potentiality and heterogeneity – and information signals, which in general are called information, when in fact they are but a non-necessary instrument, particularly developed when the parts that form a system are far from one another, as in the case of a macro-organism or in a society.<sup>27</sup>



The difference lies precisely in the notion that information names the passage from a realm of metastable disparation in which neither code nor signal obtain; the invention of a structure that can make these divergent potentialities, these heterogeneous aspects of being, 'compossible'. Information is the 'singularity of the "*hic et nunc*" of operation, a pure event in the same dimension as the individual which is in the process of appearing'.<sup>28</sup> The event of information is thus defined as the emergence of a 'dimension' wherein the individual can come to exist and function, a dimension taking over from the scalar heterogeneity or energetic tension that precedes it.

In order for this dimensional creation to take hold, two conditions are required: firstly, as for individuation *tout court*, the existence of a metastable or problematic field of preindividual being; secondly, the presence of a germ of structure, a kernel of individuality that catalyzes the resolution of the disparation that the preindividual carries. With regard to this latter component, Simondon will speak of a 'tension of information'. This is a concept designed to replace the bit or measure of information at the centre of the mathematical theory. The tension of information refers to 'the property possessed by a schema to structure a domain, to *propagate* itself through it, to *order* it.' This tension is unquantifiable prior to its effects because of its operational link to its counterpart, the metastable domain. Simondon's information is characterized by its being directed at 'receivers not defined in advance'. In other words, it consists of 'a certain *arrangement* capable of modulating energies far more considerable [than its own], deposited in the domain which will receive the form, which will take on a structure'.<sup>29</sup>

The reason for Simondon's belief that the '*notion of form must be replaced by that of information*' is linked to the impossibility of *anticipating* ontogenesis, which is in turn sustained by the thesis of the metastable disparation of being. The structural germ whose tension modulates a hitherto 'impossible' domain in no way provides a model that would inform matter and allow us to measure either its own order or its probabilities of faithful transmission. The capital error is therefore that of not properly distinguishing the interactivity of information from the fixity of form. Nevertheless, Simondon retains from the hylemorphic schema – now revealed as a degenerate or hypostasized variant of informational modulation – its asymmetry: no longer the asymmetrical command of a formal principle over an inert matter, but the asymmetry of a temporalizing process of individuation, which advances from the insertion of a germ to the 'contagious' structuring of a domain rich in energy and yet riven by heterogeneity, unstable. Hylemorphism (mis)represents a regime

of forces – forces that need to be mediated and instituted, whose potentials or capacities are selected in the event of information – as an abstract and hegemonic dualism. As Simondon writes, ‘it is in the course of [the] passage from potential to actual [energy] that information intervenes; information is the condition of actualization.’<sup>30</sup> This intervention of information – as an event which produces the ontogenetic communication between a structural germ and a metastable domain – signifies that actualization cannot be anticipated by any logical, material or mathematical form. This is yet another application of Simondon’s dictum: ‘the *a posteriori* becomes *a priori*, the event becomes principle’.<sup>31</sup>

### 5.3 Interaction: beyond determinism and organicism

Simondon’s critique of pure information resonates with a current of thought that has done much to revive the debate over individuation in contemporary scientific and philosophical inquiry: interactionism.<sup>32</sup> I would like to indicate briefly some of the contributions that interactionism has made towards enriching a relational theory of individuation, and then turn to how Simondon’s recasting of information can help us draw a clear and useful divide between interactionism and organicism. This latter distinction is all the more important in that – with specific reference to the individuation of the living – Simondon himself has been accused of affirming an essentially anti-Darwinian primacy of the organism, turning it into the veritable *agent* of individuation.<sup>33</sup>

The authors that we class here as ‘interactionist’ are all in agreement with one of the critical postulates of Simondon’s philosophy: that no account of individuation is well served by conceiving developmental relations as obtaining between a distinct object (or environment) and subject (or plan of organization, code), or, in a cybernetic model, as possessing an input–output structure.<sup>34</sup> Together with Simondon, with whom they share their critique of adaptationism, they regard such approaches as tainted by their reliance on a *representationalist* paradigm of individuation. This is a paradigm that depends on the fixity and functional independence of the structures that code an individual’s interactions with its environment, anticipating and determining its behaviour as well as its ontogeny.<sup>35</sup> It is important to note that the interactionist writers that we are principally concerned with here, Susan Oyama and Horst Hendriks-Jansen, take great pains to distinguish themselves from a conciliatory standard variant of interactionism, one that would propose that when considering processes of ontogenesis and behaviour we ‘also’

take into account environmental ‘factors’, phenotypic contributions, and the like. In order to distance themselves from such a stance, these authors have opted to designate their research programmes as ‘constructivist interactionism’ and ‘interactive emergence’, respectively. The terms emergence and constructivism point us to a question that directly concerns the ontology of relation broached above. Whilst standard interactionism can be regarded as a position that espouses a liberal pluralism of principles of individuation, but *nevertheless presupposes the distinction between these principles and the ontological domains to which they correspond* (for example, the genomic and the ecosystemic), constructivist or emergentist approaches regard the very isolation of principles or the causal apportioning of factors as a hindrance to tracking the ontogenetic operations that give rise to and modulate systems, and, in so doing, account for the (relative) distinction of organism and environment as the apparent poles of ontogenesis and behaviour.

In terms of the nature/nurture debate, whose dissolution has been the critical goal of this radical interactionism, the requirement is therefore that of providing models of developmental and behavioural individuation in which the fate of the given system is not anticipated by or latent in any one of its components.<sup>36</sup> As Hendriks-Jansen writes:

Dynamical systems theory has made it possible to conceive of complex behaviour as arising interactively from the structure of the environment in conjunction with the creature’s internal dynamics. We no longer need hierarchically organized planning systems to explain intricate temporal structure. A natural creature’s behaviour does not need to be preplanned. It does not have to exist as an abstract internal representation in the creature’s head before it is ‘executed’. The complex structure can emerge as and when it happens from the dynamic coupling between an organism and an environment.<sup>37</sup>

It is no surprise then that by opposing relational to principal accounts of systemic individuation, radical interactionism has independently found itself rehearsing some of the same critical moves that had emerged out of Simondon’s overtly ontological project. The hylemorphic character of scientific theories of individuation in biology (genetic determinism) and psychology (representationalism and computationalism) has borne the brunt of many of the interactionist attacks.<sup>38</sup> More specifically, the validity of the ‘classical’ concept of information has come under fire. One of the most striking points in this regard is that where ideological debates have presented varieties of informational determinism as part

and parcel of a materialist legacy in science, the interactionist discerns a very distinctive move, which is essentially that of *materializing intentionality*. This operation, classed by Oyama under the provocative heading of the 'ghost-in-the-machine machine', entails passing from the detailed description of the regularities of a developmental system to the fixation of one of its components as both the individuating agent and the individualizing control of the processes of individuation.<sup>39</sup> It is interesting to note that this isolation of principles of individuation, this static genesis of principles by analogy with cognitive command (deciding, controlling, anticipating), takes place irrespective of the purported mechanist or vitalist allegiances of its supporters. Interactionism exhaustively exposes the manner in which, in order to explain the origin of regularity and the trajectories of individuation, deterministic theories opt for explanatory entities that synthesize the mechanistic requirements of a scientific materialism with the impersonal intentionality of a principle of 'command and control'. The interactionist position affirms instead that the modelling of the operations of individuation, and of the manner in which each and every time they bring heterogeneous interactants together, means that any single condition of individuation – for instance, the gene within biological development – is *necessary but necessarily not sufficient*.<sup>40</sup>

In this respect, it is imperative to dispel the notion that rejecting the isolation of causally determining informational principles of individuation can only issue in a defence of some variety of holism or organicism. Precisely because they base themselves on a thoroughgoing critique of the recourse to individuated terms as the sources of a causally univocal and unidirectional explanation of becoming, neither Simondon nor the interactionists could coherently endorse the idea of the organism (or of any other 'unit' of becoming) as the sovereign agent of its own individuation. If their ontology rests on a preindividual state of disparation (Simondon) or a field of heterogeneous interactants (Oyama and Hendriks-Jansen) how could any unilateral agency be anything but the mere displacement and return of the very principles of individuation that have been subjected to such severe critique? If we can indeed speak of any 'primacy of the organism' here it is certainly not of the organism *qua* agent, but only of the organism as a local resolution of disparation, as the invention of a compatibility between heterogeneous domains and demands: an 'emergence produced by asymmetrical captures correlated in time'.<sup>41</sup> If the organism, rather than the gene, is a privileged entity for interactionism it is not because it could serve as a principle, but rather because, as Simondon will remark, it is *both* the result *and* the 'theatre of

individuation'. In other words, the organism is the site of becoming and not the agency that determines its outcome.<sup>42</sup> The focus on the organism is therefore placed at the service of a constructivist ontology of relation, directed against any intentional or principal explanation of individuation processes. The organism is not a *subject of decision* but the non-intentional invention of a local resolution of disparation and metastability.

As we noted in Section 5.1, and as the interactionists affirm, the individuated cannot be considered in abstraction from its coupling to an associated environment and to a field of preindividual potentiality. Rather than an emphasis on the 'Kantian' cybernetics of self-regulation and autonomy, we are dealing with the question, at once temporal and topological, of the *internalization* of the distinction between individuality and the preindividual. Contrary to what the term 'first information' might suggest, Simondon considers that for certain forms of individuation – essentially ones in which metastability is internalized as a charge of preindividuality, a potential in continuous need of resolution – the event of information does not disappear with an initial morphogenesis, constituting instead the continuous becoming of the individual through the resolution of its internal disparation; that is, through the actualization of its latent and heterogeneous potentiality. This is why information does not simply name the resolution of disparity or the communication between individualities, but also refers to the procedures of *individualization*. It is this sense – of an internalization of disparation – that Simondon qualifies his defence of the idea of an informational closure, of the individual viewed as a 'structured regime of information'.<sup>43</sup>

Given Simondon's understanding of information, the fact that the individual is considered in these terms does not entail its autopoietic sovereignty. On the contrary, it means that the (living) individual is not just the local invention of a resolution to the heterogeneity of being, but must persist in being the site of inventions, with regard both to its environment and to itself: the individual is that being which functions upon itself, transforming its potentialities and inventing new structurings, in turn requiring new relationships to the preindividual component. In this sense, we could even say that the living individual is *its own problem*. This problematicity is crucial if we are to entertain the idea of the individual as a 'theatre' rather than an 'agent' of individuation. To consider the individual in its relation to its 'own' preindividual component is necessarily to reject the pervasive idea that such a relation can be simply dominated by a 'centre' where information can be 'stored'.<sup>44</sup>

Rather, the interiority of the individual is itself to be conceived as a relational reality, one that still involves, within its boundary, the problematic insistence of disparation and the requirement to invent novel forms of integration.

To have done with the 'ghost-in-the-machine machine' entails applying a total critique to the *organism as idea*, to the claim that the processual and interactive consistency of the living individual can be punctually located in any one of its components, or that the principle of individuation is itself materially localizable. If individuation is to be understood on a disparate ground, as the integration of heterogeneity, it is not possible to postulate the *auto* of an informational or causal autonomy in the *form* of a whole that would effectively regulate the interaction of its discrete parts. In this respect interactionist ontology goes beyond Peirce's habitual suspension of the Kantian antinomy of individuation. Peirce's iterative model, whilst also providing an escape from the specious alternative between autonomy and heteronomy, remains bound to a cumulative understanding of the operations of individuation which is essentially uni-directional and mono-dimensional. Peirce's philosophy of habit ultimately presupposes the essentially undifferentiated character of the preindividual, whether as pure multiplicity or homogeneity, together with a seemingly inevitable, and ultimately teleological, progression to differentiated order. The introduction of metastability and disparation as traits of the preindividual allows Simondon to confront the persistence of heterogeneity, and to think of individuation as a real resolution – *the invention of a relation* – rather than as the ineluctable work of a repetition that is mitigated only by absolute chance or spiritual spontaneity. That ontogenesis is not simply an irrepressible movement from the indifference of non-relation to the relational density of an individuated system signifies that we can think the difference within the very operations that engender individuals. This is why disparation is indispensable, why it allows us to think the 'individual as corresponding to conditions of crisis, discontinuity, transference',<sup>45</sup> in other words, to think the individual outside of any principal or teleological anticipation of its becoming. Rather than functioning in the continuity of mechanisms of assimilation or accumulation, this individuation takes place across *intervals*: 'An interval in effect means the possibility of a relation [*rapport*], and a relation implies operation.'<sup>46</sup>

#### 5.4 Transduction: search for a method

Before turning to the transformations undergone by this schema of individuation in the thought of Gilles Deleuze, let us briefly consider

the methodological component of Simondon's proposal. In order to be faithful to the specificity of the latter we must return once again to the issue of relationality. Since the extrapolation from constituted terms of the instances that determine them, whether punctual or holistic, is a move incompatible with Simondon's ontology, he needs to find a way to think the individuation of thinking itself, without deploying it from the start as one of two preconstituted extremes. Being and thought, rather than correlated as object and subject, or dissolved into the unity of a higher principle, must therefore enter into a far more complex bond, which we could provisionally register under the aegis of Oyama's constructivist interactionism.

Our first obstacle is terminological. To identify the relationship between thought and individuation, Simondon in fact makes use of the term 'analogy', a term that was already the object of criticism in Chapter 1.<sup>47</sup> Just as with symbolism, Simondon's notion of analogy demonstrates a fundamental departure from the Kantian position. It is not a question here of referring phenomena, in a regulative mode, to ideas that would direct our engagement with them by eliciting a reflection upon our own powers of cognition. Simondon's analogy is instead a functionalist one, based on the idea that philosophy can consider operations in abstraction from the structure they affect and constitute, thereby articulating processes of individuation taking place across different domains with one another. It is in this sense that Simondon identifies philosophical inquiry with *allagmatics*, 'the theory of operations'. An operation being defined here as 'the conversion of a structure into another structure', such that 'an act results in the determination of a trace and a trace in the ulterior determination of an act'.<sup>48</sup>

Crucially, this analogy does not involve a vertical movement between a case of individuation and some higher, exemplary form. Thought is co-individuated 'with' phenomena inasmuch as it constructs its concepts on the basis of how it is affected by their specific modes of individuation; it is not the attempt to reflect (upon) the genesis of phenomena in a formal element of universality and intelligibility. What affects thinking is not the structure *per se*, but the operation of a given domain of being: 'The analogical method presumes that one can know *by defining structures on the basis of the operations that dynamize them*, instead of knowing *by defining operations through the structures between which they are exercised*'.<sup>49</sup> Thinking neither knows nor explains individuation, it individuates (modalities or regimes of) individuation by individuating itself. This individuation in thought and of thought always takes place with relation to an individuation in being, by way of a

process that Simondon names *transduction*. Thought, in other words, always comes second.

Transduction, which may also denote individuation *tout court*, defines a relational and ontogenetic process whereby a domain of being finds in another its principle of constitution, such that a germ of structure affects a hitherto unstructured, metastable regime.<sup>50</sup> For Simondon, the Parmenidean unity of being and thought is a matter of *contagion* rather than *totalization*; a matter of *ontogenesis* rather than *critique*. When it comes to thought, however, we are not simply in the presence of a horizontal process of structuration. Instead, we encounter a capacity for torsion: based on the individuations of being, thought constitutes itself as a space whose inhabitants are the dynamisms of constitution themselves. It is here that we locate the question of philosophy as a theatre of production, which we will investigate in Deleuze's work and return to in the conclusion.

This methodological question is inseparable from a temporal reconfiguration of the relationship between philosophy and individuation. If the *philosophy of individuation* is constructed *pari passu* with an *individuation of philosophy* – an ineluctable consequence of the rejection of principles of individuation – then there is no preconstituted position, no *subject* of philosophy, whence the fortunes of being could be anticipated. If the operations of transduction precede the structured constitution of an autonomous sphere of philosophical cognition then the closure of philosophy is impossible. In this respect, though Simondon's philosophy can be considered, in some sense, as transcendental, it is certainly not critical. In fact, its ontology of individuation poses one of the strongest challenges to the entire Kantian orientation in philosophy, and this not only in the latter's 'peripheral' effects – such as the anomaly of the organic – but in its fundamental premises. The following passage is emblematic in this regard:

We wish to say that the *a priori* and the *a posteriori* are not to be found in cognition [*la connaissance*]; they are neither the form nor the matter of cognition, because they are not cognition, but extreme terms of a preindividual, and consequently pre-noetic, dyad. The illusion of *a priori* forms derives from the pre-existence, in the preindividual system, of *conditions of totality*, whose dimension is superior to that of the individual on the path to ontogenesis. Inversely, the illusion of the *a posteriori* derives from the existence of a reality whose order of magnitude, with respect to spatiotemporal modifications, is inferior to that of the individual. A concept is neither *a priori* nor *a posteriori*



but *a praesenti*, because it is an informative and interactive communication between what is greater than the individual and what is smaller than it.<sup>51</sup>

The focus on operability and the transductive character of philosophical construction leads towards a *temporalization of philosophy*, a philosophy *in* time rather than a philosophy *of* time.<sup>52</sup>

On the same grounds on which it opposes critique, the transductive approach to philosophical methodology counters three rival options: reduction, deduction and induction. Contra reduction, it poses the reversibility of structure and operation, such that no unilateral foundation of the latter upon the former can be postulated without thereby returning operability to that 'dark zone' to which it has hitherto been relegated by the principal theories of individuation. According to the same lines of argument, the transductive approach rejects both deduction (transduction has no principle, instead drawing solutions out from a domain in 'tension') and induction (transduction does not presuppose the existence of terms from which it would ascend to a causally sufficient source).<sup>53</sup> Just as he 'regionalizes' classical ontology, allowing us to consider it as a perspective on being that forecloses its dynamic link to preindividual potentiality for the sake of substances and principles, so does Simondon also regionalize classical theories of knowledge, suspending the pivotal status of the individuated terms they ground and classify.

The character and scope of this suspension must be referred back to the concept of the preindividual. This concept has been appropriated in Garelli's work for the sake of a radicalization of the phenomenological project, hunting down the residual prejudices of individuality still at large in Heidegger's inquiry – whether in the decisional capacities of Dasein or in the acceptance of a certain model of technical production – so as to approach the ontological difference at a 'deeper' level. As Garelli writes, 'preindividuality cannot derive from, be induced or deduced from an individual order'.<sup>54</sup> It is just this deduction that he sees repeated even in the most uncompromising moments of the phenomenological tradition. In contradistinction, Garelli proposes an image of the preindividual both as a savage proto-ontic domain and as not-being. From this vantage point the preindividual names the infraphenomenal source of the givenness of phenomena, manifested even in the deobjectifying consequences of Heisenberg's interpretation of the Planck constant. It is not difficult to discern the polemical impetus behind this phenomenological approach to the preindividual: anti-reductionism.<sup>55</sup> The following

statement is representative, not least on account of its use of capitalization: 'The Preindividual is not the reign of confusion, but the blinding clarity of "the unlimited", stretched out beneath the appearance of the falsely traced frontiers of a being already fragmented, in concepts.'<sup>56</sup> Alas, even though Garelli guards himself from an 'indifferentiation' of the preindividual, it is hard not to think that the flight from reductionism obscures the *relational* character of preindividuality itself, the movement from disparation to transduction. Ultimately, this ultra-phenomenological interpretation turns a relative, *ontogenetic* difference into a static ontological one. The attention to an operability that would come 'before' the constitution of terms thus risks turning into a negative theology of the preindividual or, even worse, into the apologia for an ontology of *qualia* that only a sovereign philosophical operation could capture.<sup>57</sup> Yet isn't the consideration of the fallacies of hylemorphism, mobilizing energetic variations and intensive differences in matter, the very reason why the preindividual cannot be conceived as 'originary' or pure in any sense?

Simondon's use of the concept of *field* seems to suggest an affirmative response. Unlike a structured grid of possibilities (or even a physical state space) prefiguring or determining the individuations that draw their norm from it, a preindividual field is constituted as a *determinable* domain, in which differences and incompatibilities function as the potentials that a germ of information can resolve and modulate.<sup>58</sup> In this regard, the field is both determinate (it is populated by disparations, real conditions of individuation that are neither arbitrary nor indifferent) and untotalizable (its dimensions are not the parts of a whole but the tensions of a system that can only be retroactively individuated once these are resolved). A preindividual field is thus not to be considered as a creative reservoir of phenomena or an unlimited source of givenness but as a *real* condition of individuation. A preindividual field does not contain or anticipate the forms that any individuation may take, but it does oblige it to be the individuation of *this* field and not of preindividuality or 'being' as such. It would therefore be more accurate to speak in the plural of preindividual fields – determinable energetic and material conditions modulated by events of information – and to consider being as nothing other than the untotalizable plane that these fields populate. From this perspective, individuations always result from an event that resolves the determinable potentiality harboured by a given field. In turn, preindividuality, rather than as the core of production, should be regarded as inextricable from an ontogenetic, relational complex in which the field and the event of information are reciprocally defined.

To speak of the preindividual 'as such' is to incur the danger of once again forgetting the specificity and variety of individuating operations for the sake of a cosmogonic narrative moving from the undifferentiated to the individual, a narrative that would be forced, once again, to adduce transcendent principles to explain the fact of productivity.

In our responses to some interpretations of Simondon's work on relationality and the preindividual we have not sought simply to separate correct from erroneous readings. Even in principle, this is not an available option. Simondon's work really does repeat the two tendencies which we have already discerned in the attempts to evade a Kantian matrix in the philosophy of individuation. Separating out a certain strand or tendency within his work is part of a wider attempt to consider the relational variants of the ontology of anomalous individuation. As we already began to do with Nietzsche and Peirce, we can distinguish a cosmogonic model of preindividuality – thinking the *apeiron* that both precedes and subtends the partition of the world into items and regions – and a relational/differential model of individuation, which combines the recursive temporality of habit with the 'problematic' character of an intensive difference, such that individuation is considered as an invention. As we shall see in the next chapter and the conclusion this division of tendencies within post-Kantian philosophies of individuation can ultimately be brought down to two questions: Where do we locate the difference *within* ontogenesis? How does individuation take place in philosophical practice itself?

# 6

## The Drama of Being: Figures of Individuation in Deleuze's Philosophy of Difference

Nothing is harder to define than the individual.

Gilles Deleuze, 27 January 1977

### 6.1 Internal difference and the theory of multiplicities

In the foregoing chapters I sought to trace a series of speculative constellations capable of undoing the subordination of the problem of individuation to its Kantian matrix, with the aim of drawing out the ontological consequences of the paradoxical encounter with the problem of life that had beset Kant in the *Critique of Judgment*. Through this treatment of Kant's own unfinished work, of Whitehead's philosophy of the organism, of Nietzsche's critique of teleology, of Peirce's theory of habit and of Simondon's relational account of ontogenesis, we have accumulated some of the ingredients for an alternative model of individuation. On this basis we have begun to discern how the question of the organic might no longer elicit a merely regulative solution, opening up instead onto a philosophy of production concerned with the inquiry into the preindividual sources of individuality, or better, into relations and operations that account for the individuated without presupposing it in turn. As Nietzsche's critical reflections made so forcefully clear, one of the principal tasks in this respect is that of contesting the *de jure* dominance of a philosophy of identity and representation over an inquiry into the morphogenesis of beings and the genesis of the intellect. Thus, it was in order to designate a counter-tradition within the philosophy of

individuation founded on the reversal of this primacy, that I referred, somewhat barbarously, to an *ontology of anomalous individuation*.

'Anomalous' is here taken to signify that what precedes or commands individuation is not to be located in the identity of a principle, be it of a formal or regulative variety, but in a transcendental field of preindividual being whence individuality emerges as a relational resolution of disparation or difference. A non-representational philosophy of individuation interrogates individuality from the fugitive vantage point of 'the *anomalous, an-homalos*, the unequal in itself and to itself ... The anomalous is *hétéro kath'hétéro* where the Platonic Idea is *auto kath'hautô*.'<sup>1</sup> Neither autonomous nor allonomous, suspending the representable identities that function as the principles or terms of individuation, the anomalous approach is related to the idea of a heterogenesis, of a production of and from difference, *of the different from the different (hétéro kath'hétéro)*. Rather than deploying itself as the exhaustive survey of a unitary and homogenized horizon of objectivity, composed of classifiable and discrete facts and entities, such a philosophical perspective seeks the sufficient reason of phenomena in a 'heterogeneity in the production mechanism'.<sup>2</sup> We have already encountered a variety of this non-representational, differential ontology in Simondon's 'transductive' account of individuation as both the resolution (or integration) of disparation and the production of novel differential conditions for further individuations.

Along with the *pars destruens* of these ontologies of anomalous individuation, and the figures they propose as an alternative to the Kantian antinomy – figures such as assimilation, habit and disparation – we have also encountered a recurrent peril that haunts the search for the difference in production beneath the order of representation. The ether as material continuum, life as infinite multiplicity, absolute spontaneity, the preindividual as proto-ontic source of phenomena ... all these concepts insinuate that at the heart of the attempt to undercut the identitarian character of the philosophy of representation there lies an essentially undifferentiated *core* of production, a unitary *motor* of ontogenesis. It seems as if the ontology of anomalous individuation were doomed – in its attempt to venture beyond the Kantian distinction between the determinant and the regulative – to seek an intellectual intuition of the underside of representation, to engage in the sort of *fanatical* exhibition of infinite being that Kant had castigated as the very hubris of metaphysics.<sup>3</sup> Though many of the tools necessary for resisting this backlash can already be drawn from the thinkers hitherto discussed, it is with Deleuze that we truly encounter, in what is perhaps its most nuanced and exhaustive form, a non-representational variety of

determination that resists the temptations of the *via negativa*, whilst continuing to seek a philosophical intuition of productive being.

However much critics (or misguided partisans) seem determined to portray Deleuze as a philosopher of the Absolute, or of pure creativity, it is a matter of public record that one of the proscriptive criteria for Deleuze's project, relentlessly reiterated throughout his work, is precisely that of *not* falling into the either/or posed by the philosophy of representation. This is the case with regard to the determinacy of production *tout court*, and of individuation in particular. This demands rejecting the alternative between, on the one hand, an undifferentiated creative being and, on the other, a representational form of determinacy founded on the criteria of common sense and good sense, such that individuation would ineluctably be submitted to the form of identity (objective and subjective) and to the teleology of reason. Thus, whilst the ontology of anomalous individuation remains fascinated and often drawn to the idea of bringing 'productivity itself' to thought – as Deleuze and Guattari will affirm, its face is turned towards chaos – the greatest danger remains that of simply dissolving all determination into the tepid bath of the Absolute or, alternatively, of freezing the process of differentiation into the ontico-ontological difference between the individuated and the preindividual, conceived as two categorially distinct domains of being. The challenge then, if the groundlessness of individuation is not to turn into the mystical contemplation of the abyss of being, is to think processual determinacy without the transcendent anchor provided by a *principle* of individuation;<sup>4</sup> that is, to understand what Deleuze means when he writes of difference as 'the state in which one can speak of determination *as such*.'<sup>5</sup>

To get a better purchase on this question of determination, it is worth reminding ourselves of a philosophical imperative that runs throughout Deleuze's writings, operating as the complement of the aforementioned proscription. This is the demand that philosophy transform itself from an inquiry into possibles and universals into a systematic, if necessarily polymorphous, attempt to seize upon the *conditions of realization* of phenomena, to use an expression that recurs throughout Deleuze's sustained *agon* with the founding tenets of Kantianism. Rather than subsuming particulars, the demand now placed upon the concept is that it attain the singularity *as such*. This is no less than the 'purpose of philosophy' such as it is promulgated by the philosophy of difference. In his 'The Conception of Difference in Bergson', a piece that is like the infinitely folded or implicate germ anticipating much of his ensuing work, Deleuze writes: 'If philosophy has a positive and direct relationship with

things, it is only to the extent that it claims to grasp the thing itself on the basis of what it is, of its difference with all that is not it, that is, in its *internal difference*.<sup>6</sup> As Badiou comments: 'The real question ... is that of singularity: where and how does the singular meet up with the concept? If Deleuze likes the Stoics, Leibniz, or Whitehead, and if he does not much like Plato, Descartes, or Hegel, it is because, in the first series, the principle of individuation occupies a strategic place, which it is denied in the second.'<sup>7</sup> Deleuze's philosophy thus emerges as an outright denial of the Aristotelian prohibition on a science of individuals, which we have already encountered in the introduction. The goal of attaining the *internal difference of a thing* means that the philosophy of difference is inseparable from the search for another approach to the problem of individuation. Such a non-Aristotelian and non-Kantian approach would necessarily detach the capture of individuation from the problem of universals as well as conferring upon it the privilege of precedence with regard to the latter. The representation of individuals as particulars subsumed under universals would thereby be relegated to the status of a distorted region comprised within a far broader non-representational ontology.

Badiou himself points to Deleuze's celebration of a 'Leibnizian revolution', signalling the 'wedding of concept and singularity', as the cornerstone of such an alternative to the traditional subordination of the being of individuation to the reasons of universals.<sup>8</sup> Indeed, it seems that with Leibniz, we are freed from the categorial frame – formulated by Aristotle, canonized by Porphyry, and modernized by Kant – that subjugated the ontology of individuation to the epistemic treatment of specification. With Leibniz, 'Individual difference is not specific, and the individual is not the last species or *infima species*'.<sup>9</sup> To the extent that before Leibniz the concept, however stretched its extension or comprehension may have been, never truly attained the individual, we are thereby entitled to speak of a revolution.<sup>10</sup> The Leibnizian 'individual notion' is a purely chimerical figure for any philosophy for which the individual is by definition beyond the pale of the concept, or, alternatively, for a nominalistic denunciation of the subsumptive power of concepts themselves. For Deleuze, Leibniz is at the source of an epochal emancipation of philosophy that truly allows it to answer to the call 'to the things themselves!', now indistinguishable from 'to the concepts themselves!', in what I am tempted to christen a superior nominalism.<sup>11</sup> This wedding is tantamount to a refusal of the conviction that philosophy must begin from generality and then descend to the particular through a graduated movement of specification, with the individual as its asymptotic or

foreclosed limit. Here lies the 'catastrophic presupposition' of the pre-Leibnizian theories of individuation.<sup>12</sup> The epithet is warranted to the degree that, however micrological the operations of specification, in such models there always remains a strictly immeasurable abyss between the smallest species and the individuals or singularities 'beneath' it. In this light, the audacity proper to the Leibnizian project is precisely that of inverting the Aristotelian schema, and determining generality and specificity as *effects* of the internal differences of monadic individualities.

Having said that, it would be rash to collapse Deleuze's reading of Leibniz onto his own position without further ado. As Deleuze himself notes, by locating the individuating factor of a substance no longer in an essence that can be attributed to it but in the *manners* of its being, the events that are predicable of it, Leibniz is the catalyst of a 'revolution in the notion of substance'. And whilst the latter is 'perhaps as great as the revolution that will consist in doing without the notion of substance', it is arguably in the horizon of an individuation *without* substance, that is, without any preconstituted nodes of individuality, that Deleuze's own theory of individuation unfolds. The crux of the matter thus depends on how we understand the claim that: 'Individuation comes first.'<sup>13</sup> Are we to conceive of a monadic organizing activity as the sufficient (that is, ontogenetic) reason for specified order?<sup>14</sup> Or are processes of individuation to be thought without recourse to any individuality whatsoever, whether constituting or constituted? Deleuze's encounter with the philosophy of individuation – whose high points are the theory of spatiotemporal dynamisms in *Difference and Repetition* and that of haecceities in *A Thousand Plateaus* – ultimately leads him to separate the two principal aspects of the Leibnizian theory: on the one hand, a theory of the 'condensation' of preindividual singularities and series into worldly individuals, on the other, the thesis that 'individual substances are the only realities'. It is in part by giving primacy to the former and excluding the latter, or by considering individuals as 'secondary singularities' [*singularités de seconde espèce*],<sup>15</sup> that Deleuze will try to construct a new status for determination, to be conceived precisely as difference.

How then does Deleuze's thought move from the initial demand of a coincidence of concept and thing to a consideration of a preindividual and differential transcendental field? We need to follow here the way in which internal difference is no longer considered simply as the difference *of* a thing, *its* intrinsic principle of individuation, but comes to signify the attempt to think differentiation itself as the source of individuality. If difference is both 'the particular that is' and 'the new making itself', it is the latter that will prove to be the foremost concern of the philosophy



of difference, defining its perspective on individuation.<sup>16</sup> But what is difference internal to, if not to a 'whole entity' that would coincide, as in Leibniz, with its principle of individuation? If recourse to particularity, individuality and actuality is to be suspended, and the transcendental no longer traced from the empirical, how will the philosophy of individuation articulate conditions of realization and, as it were, carve the real at its joints?

Once again, the question is that of determination. In Simondon and the methodological orientation of interactionist constructivism we have already encountered an attempt to think at the level of constitutive operations and dynamic relations that resist their decomposition into primitive individualities, or their referral to supplementary principles and categories. Deleuze himself will return to this matter of the independence of relations, but on the basis of an ontological primitive that is not of the order of either a unit, principle or universal: the concept of *multiplicity*. The purely negative effect of formulating an ontology of individuation woven of multiplicities is very basic and immediately evident, as well as amply anticipated by our previous investigations: any account of individuation founded on the synthesis or the subsumption of a *multiple* of being by the *one* of a concept is ruled out from the start.

But rather than merely repelling this dialectic of the One and the Multiple – which Deleuze considers to be the matrix of all dualism – as the cardinal ontological sin behind the 'catastrophic presupposition' of traditional approaches to individuation, Deleuze, in a move that illustrates how his philosophy of difference doubles as a critical ontology, actually recasts it as a distorted view of what in truth constitutes just one half of the definition of multiplicities.<sup>17</sup> What permits the postulate of transcendent principles of order that would subsume multiples is the fact that they operate upon a definite kind of multiplicity. Deleuze, writing on Bergson, defines this multiplicity as 'a multiplicity of exteriority, of simultaneity, of juxtaposition, of order, of quantitative differentiation, of *difference in degree*; it is a numerical multiplicity, *discontinuous and actual*'.<sup>18</sup> What is distinctive about this kind of multiplicity from the standpoint of individuation is that, defined by its difference of degree, it can be divided at will, carved up and recomposed by an external instance without any transformation in its fundamental properties or characteristics ensuing thereby. Such a multiplicity defines a mode of being or entity as homogenous in its composition and dependent on a heteronomous principle for its individuation. It is the indifferent material subtending the formal operations of numbering, division and organization. Never engendering or accounting for authentic individuations

that would be capable of manifesting their internal difference, this 'objective' multiplicity can only ever present provisional units, effects of division that once again find their difference in another.

It is with the second type of multiplicities – *continuous* multiplicities – that Deleuze obtains conceptual support for an account of determination not reliant upon a heteronomy of principles. It is this idea of multiplicity that allows Deleuze to seize the *desideratum* of internal difference without the 'catastrophic' presupposition of universality, or the dialectic of One and Multiple, Form and Matter, that marks substantialist approaches to individuation. What distinguishes these multiplicities is that they cannot be measured or divided without effecting a change in kind; that is, without thereby triggering a new individuation. In other words, their difference is not externally measured, determined by a supplementary principle, but immanent. As Deleuze and Guattari write:

A multiplicity has neither subject nor object, only determinations, magnitudes, and dimensions that cannot increase in number without the multiplicity changing in nature ... We do not have units of measure, only multiplicities or varieties of measurement ... Unity always operates in an empty dimension supplementary to that of the system considered.<sup>19</sup>

Such multiplicities are therefore the means for a determination not only of individuation, but of individuality itself, which abandons the eidetic and mereological parameters inherited from Kant. As Deleuze writes: 'The multiple, mobile and communicating character of individuality, its implicated character, must therefore be constantly recalled. The indivisibility of the individual pertains solely to the property of intensive quantities not to divide without changing in nature.'<sup>20</sup>

Two very significant interrogations arise at this juncture. Both are directly related to the manner in which we have chosen to thematize the ontology of individuation. The first concerns the *autonomy* of such continuous multiplicities. These multiplicities are arguably conceived as the ontological primitives through which we can access and configure the preindividual being of production, and are consequently opposed to the externality and heteronomy of measure, be it objective or subjective. Have we not thereby reinstated, albeit without explicit reference to the organic, an autonomous modality of individuation, now graced with a status of ontological primacy? In order to adjudicate this question, it is best to turn to Kant himself, and to those multiplicities he refers to as magnitudes or quanta, as well as to how they relate to the difference

between objective and organic individuation. Kant begins from the problem of the divisibility of appearances, of wholes given in intuition. This procedure, descending from the conditioned to its conditions, is decreed by Kant to be infinite in principle. Since no conditioning part attained by divisibility can be regarded as itself unconditioned, the division cannot cease – what we have is a kind of halting problem. However, since what we began with was a bounded *whole* of intuition, all the parts are contained *a priori* within the whole. But the object of Kant's critique is not the divisibility *per se* of a given whole, it is rather the claim that an intuition of the conditioning of the whole by an infinity of parts could be given. As Kant argues: 'since this regress is infinite, all its members (parts) to which it has attained are of course contained in the whole as an **aggregate**, but the whole **series** of the **division** is not, since it is infinite successively and never is **as a whole**; consequently, the regress cannot exhibit any infinite multiplicity [*Menge*] or the taking together of this multiplicity into one whole'.<sup>21</sup> The object of Kant's critique is Leibniz's notion of the organic as an infinitely reiterated natural machine. For Kant, multiplicities cannot be removed from the order of succession. Therefore, to intuit a given multiplicity as 'articulated to infinity' is simply unthinkable. In Leibniz, Kant identifies an elision of the difference between the *determinability* of appearance, and the *determination* of the multiplicity. On the basis of the discursive nature of the understanding and the spatiotemporal character of individuation, appearance is a *quantum continuum*, whilst every determinate whole-multiplicity cannot but be a *quantum discretum*, in which 'the multiplicity of units is determined; hence it is always equal to a number'.<sup>22</sup> Leibniz's error is therefore that of positing in the organic both the infinity of a series and the completion of a whole.

Without further debating the relationship between individuation and the actual infinite, or the inherent validity of Kant's verdict, it is useful to reflect on the relation of this 'Resolution of the cosmological idea of the totality of the division of a given whole in intuition' to Deleuze's theory of multiplicities.<sup>23</sup> Deleuze is proposing a variety of multiplicity not subject to the heteronomy of numerical division, but outside of the mereological parameters shared by Leibniz and Kant. Moreover, he is formulating his ontology at a remove from the question of organic autonomy, understood as the self-referential processual convergence of the determination of a whole and the determinability of its parts (members).<sup>24</sup> Deleuzian multiplicities are both *determinable* – they can be actualized by division – and *determined* – they are already virtually differentiated by the relations between their dimensions. But these dimensions are not

themselves *actually* individuated, making it into an infinite, or at least indefinite, multiplicity. Evading the dialectic of the one and the multiple, this multiplicity cannot be thought as a whole of its parts, as *organic*.<sup>25</sup> It is therefore neither heteronomous, since its measure (or dimensionality) is immanent to it, nor autonomous, since it is composed of heterogeneities and, once implicated in processes of actualization, gives rise to an asymmetrical heterogenesis, producing an outside which is not reflected back into it. Once again, the ontology of individuation bears a profound link to issues of mereology and all the more so when what is at stake is the individuation of the organic and the question of its autonomy.

The second of our problems concerns the *universality* of the theory of multiplicities. In conjunction with Bergson, Deleuze mentions the work of Husserl as another instance of the fecund capture of Riemann's geometrical theory within a philosophical system, of the transformation of that 'fine flower of modern mathematics' into a potent tool of transcendental analysis and construction.<sup>26</sup> And it is Husserl perhaps, even more than Bergson, who really advanced the project of making philosophy coextensive with a theory of multiplicities. For Husserl, such a project entailed the foundation of a theoretical science of theory that would replace the Aristotelian logic of universality and specification with a purely formal, pliant and infinitely universalizable metascience. This perspective bears some affinity with the aims of that structuralism partly espoused by Deleuze, inasmuch as the latter can be conceived, chiefly in its mathematical and linguistic guises, as a revitalization of the idea of a *mathesis universalis*.<sup>27</sup> But, as we shall see in the next section, Deleuze's own understanding of structuralism in light of the ontology of multiplicity greatly transforms the very idea of formalization. The contrast is clear once we note two characteristics of Husserlian multiplicities: they are ideally *homogenous* and they are primarily manipulated to constitute the *object-fields* (or *provinces*) of axiom- or system-forms. Thus, whilst it would be incorrect to describe them as numerical – since their resolute abstraction is supposed to account for the entire field of mathematical theory (not just numbers, but sets themselves) – they are the correlates of a unified theory of systems. The Husserlian multiplicity is therefore describable as 'the form-idea of an infinite object-province for which there exists the unity of a theoretical explanation'.<sup>28</sup> The horizon of these homogenous and nomological multiplicities is the unity of theory, to which their construction is subordinated. Rather than immanently determined by their dimensionality, these multiplicities are abstract entities, the operators within a project of thoroughgoing formalization

whereby 'all the determinate What-contents of the concepts are converted into indeterminate modes of the empty "anything-whatever"'.<sup>29</sup> It would be rash, however, to relegate this understanding of multiplicity, situated in the element of a pure theoretical universality and entirely evacuated of specificity and reference, to the mere indifference of a 'spatialized' or 'numerical' theory. Husserl's theory of theories and its usage of multiplicities propose another configuration of the transcendental which, identifying the 'life of thinking' with a 'plane of purely formal abstraction', is not of the order of simple representation, nor does it necessarily fall prey to the fallacy of the empirico-transcendental doublet.<sup>30</sup> Instead, taking theories themselves as its material, it announces a different form of experimentation, transforming systems themselves into objects 'to alter them freely, universalize them mathematically, particularize the universalities'.<sup>31</sup> In this regard it is far closer to Riemann than to either Bergson or Deleuze, especially to his objection to the method of intuition. As Riemann writes: 'The continuous *concretum* blocks us by its unity. But once we have broken away from this unity, we are immediately involved in formalization.'<sup>32</sup>

It is this dispute between intuition and formalization that largely determines Alain Badiou's own polemic against the Deleuzean ontology. Whilst we shall consider it below in order to excavate the notion of a virtual totality, it is worth noting that Badiou's set-theoretical ontology of 'multiples-without-one', though utterly alien to it in its philosophical context and aims, is in many respects more akin to Husserl's formalism of multiplicities than to Deleuze's constructivism. As Badiou argues:

it is absolutely clear that Riemann's blistering anticipations demanded, for the achievement of their program, a speculative framework entirely subtracted from the constraints of empirical intuition, and that the 'geometry' in question was intended to apprehend, not empirically attestable configurations, be they bifurcated or folded, but neutral multiples, detached in their being from every spatial or temporal connotation, neither closed nor open, devoid of figure, freed from any immediate opposition between the quantitative and the qualitative.<sup>33</sup>

Deleuze's multiplicities are indeed anything but neutral and detached from spatiotemporal considerations, and it is their complete and immanent differentiation that permits their inclusion in a problematic of internal difference. This does not entail that they are empirical, nor that, like Bergsonian multiplicities, they must reinstate a dichotomy between quantity and quality. Through the prism of individuation we can see

how their role in a generative transformation of transcendental philosophy is characterized neither by self-referential autonomy nor by formal neutrality. We may also begin to discern how they can provide us with the tools to think the becoming of systems without recourse to preconstituted individualities, thus responding to the issues already broached with Peirce and Simondon.

We will now try to consider the consequences of adopting this concept of continuous or intensive multiplicities as the key to the intuition and construction of internal difference, and of viewing discrete multiplicities as derivative. In other words, what does it mean to say that 'becoming and multiplicity are the same thing'?<sup>34</sup> We will consider three components of Deleuze's theory of individuation that are constructed upon the notion of continuous or 'flat' multiplicities: the structuralist theory of ideal genesis and the concepts of intensive systems and spatiotemporal dynamisms. We will then turn our attention to a critical assessment of two possible interpretations of Deleuze's theory of individuation, DeLanda's positive 'functionalist' reconstruction and Badiou's critical indictment. In the conclusion we will present Deleuze's ethics of thought and the metaphilosophical repercussions of the ontology of anomalous individuation.

## 6.2 Structuralism and individuation: static genesis and the paradoxical entity

In his 1967 article on structuralism, Deleuze had welcomed the emergence of 'a new transcendental philosophy', hinting at a philosophical project binding him to authors ranging from Althusser to Foucault.<sup>35</sup> Trying to isolate a common denominator behind the seemingly disparate efforts of these contemporaries, Deleuze turned to the creative excavation of a common schema. He identified it as being composed, on the one hand, by the isolation and construction of internally differentiated virtual structures or abstract fields of relations, and, on the one other, by the complementary task of tracking the circumstances of the spatiotemporal actualization of these structures into a differentiated, or actual, state of affairs.<sup>36</sup>

This interpretation of structuralism, carried over into the theory of ideas of *Difference and Repetition*, is obviously predicated upon the encounter with the theory of the two kinds of multiplicities in his studies of Bergson, although, as we shall see, it results in a certain shift with regard to earlier formulations of Deleuze's ontology. Once again, Deleuze is driven by the attempt to outline a form of non-representational determination – that

is, *internal difference* – that would neither succumb to a mystical contemplation of the undifferentiated nor illegitimately presuppose constituted individualities – be they substance or essence, subject or object. The multiplicities of structuralism are defined therein as virtual ideas. They are characterized by the features we have already noted in our reading of Kant's treatment of the division of magnitudes in Section 6.1. They are both determinable continua and differentiated systems. As Deleuze writes, 'An Idea is an  $n$ -dimensional, continuous, defined multiplicity.'<sup>37</sup> This definition obviously reiterates some of the mereological considerations mentioned above: the multiplicity is not a whole articulated into an infinity of parts, but a system constituted by the mutual immanence of multiple dimensions or 'non-localizable connections' which, on the one hand, constitute the sufficient reason of discrete and classifiable actual differences and, on the other, present the only instance of truly internal difference – inasmuch as they are not determined by any instance of unity over and above the ideal consistency and coexistence of their preindividual components. As systems of differential relations these virtual structures are *reciprocally determined*. Insofar as these relations entail the distribution of preindividual singularities that delineate the implicate space and time of the structure, they are *completely determined*.<sup>38</sup> Insofar as the elements that constitute them are defined as variables, coordinates or dimensions, on the one hand, and singularities, on the other, the mereological considerations that applied to multiplicities and magnitudes in Kant are no longer germane. Not only do these 'internal multiplicities' have neither parts nor members, but since metric and denumerable multiplicities *follow* from the unfolding of these structures in genesis or actualization, the latter are considered as the sources for any further (representational) consideration of the relations between parts and wholes. As Deleuze notes, structure has nothing to do with a *form*:

structure is not defined by an autonomy of the whole, or an expression of the whole in its parts, by a *Gestalt* that would be exercised in the real and in perception; structure is defined instead by the nature of certain atomic elements that claim to account both for the formation of wholes and for the variations of their parts.<sup>39</sup>

Therefore, structures are not merely the means of formalization, but provide instead the genetic elements of a morphogenesis.<sup>40</sup>

The uniqueness of Deleuze's reconstruction of structuralism lies precisely in this consideration of structures as neither immaterial essences nor formal invariants, but rather as the preindividual grounds

of individuation. Unlike some of his contemporaries, Derrida and Adorno for instance, Deleuze seems not to register any aporias or contradictions in the relationship between structure and genesis. Rather than representing abstract entities at a remove from the vicissitudes of ontogenesis, structures as internal multiplicities are at once static (or atemporal) and dynamic (or genetic). Once again, it is the concept of multiplicity that provides the clue to the articulation between these two seemingly incompatible determinations. Considered in the mutual immanence of the differential relations that compose it, structure is static, impassively indifferent to the measurable space-time and the discrete magnitudes that characterize individuated actuality. But this internal difference becomes genetic as soon as the multiplicity of structure is actualized, divided, 'measured out'. Ontogenesis is thus defined as the passage from one kind of multiplicity, the bearer of internal difference, to another, the denumerable and classifiable multiplicity of actual beings. Deleuze defines this genesis as *static* because the structure itself, whilst providing the sufficient reason of actuality, is not a causal factor. For that to be the case, structure would itself have to be discretely individuated. In other words, it would need to be already reduced from its virtual status to an actual one. In this disjunction of cause and genesis, the crucial dissymmetry between structure and its incarnations, between the virtual and the actual, is revealed.

This dissymmetry, whereby genesis takes place from preindividual virtuality to individuated actuality, allows us to understand why Deleuze regards structuralism as a philosophy of the 'inessential'. To the extent that the implicate order of the structure as virtual idea changes in kind through division and actualization, the structure can in no way provide the One of an actual Multiple. Whilst its (reciprocal and complete) determination as internal difference – its minimal extension and maximal comprehension, as it were – affords it a singular form of individuality, it cannot provide the actual with a form of identity in which the latter would be able to recognize itself. This is why structure cannot answer the 'What?' question, the question of essence, substance or universality. Instead, Deleuze proposes to consider structure as a concrete universal, such that actual things can be viewed as local solutions that explicate the ideal and asignifying connections implicated in the former's virtual constitution. This is why the 'accompaniment' in thought of these processes of realization or individuation is what defines Deleuze's practice as a 'method of dramatization'.<sup>41</sup>

Since no subsumption under universals or identification of substances is afforded us under the conditions of dissymmetry that define static



genesis, the only logic of investigation becomes that of cases, of the 'descending' movement from structure to its solutions and the complementary 'ascending' movement from constituted actualities to the differential conditions of their genesis.<sup>42</sup> The most radical consequence of this elimination of identity from the question of determination is, of course, that thought must itself construct both the problematic fields of individuation and their solutions. This seems to be the sense in which we are to understand the demand that we shift from the question of 'What?' to questions such as 'How many?', 'How?', or 'In which cases?'<sup>43</sup> Given the *imminent* as well as *immanent* becoming that marks continuous multiplicities – such that their seizure is necessarily their transformation, whether in 'thought' or 'being' – we can neither contemplate essences nor identify universals. Instead, we must investigate the dynamisms that affect the ideal level itself, the very level that we initially approached as static.

In *Difference and Repetition*, Deleuze approaches this question in terms of what, following Leibniz's *Theodicy*, he terms the procedure of *vice-diction*. Since the internal difference of the structure as ideal multiplicity can neither be identified as essence nor subjected to a principle that would bestow consistency upon it from outside, thinking can only attain structure by individuating it, by actualizing those connections that at the level of structure's difference in itself remained purely ideal; that is, determinable. Beginning from the survey of the ideal multiplicity itself, what Deleuze calls the 'initial field', thought thus proceeds by way of two complementary operations, specifying adjunct fields and condensing singularities.<sup>44</sup> In terms consonant with our presentation of structural multiplicities, this means that the act of thought, what Deleuze calls thought's proper or transcendent exercise, is that of: (1) surveying the initial multiplicity so as to fully unfold its implicate structure and to connect it to other elements within the atemporal continuum of ideas that afford the ingredients for transformation; and (2) drawing the line that would bring together, or condense, the singularities corresponding to the reciprocal relations within the idea.

As Deleuze writes:

It is as though every Idea has two faces, which are like love and anger: love in the search for fragments, the progressive determination and linking of the initial adjoint fields; anger in the condensation of singularities which, by dint of real events, defines the concentration of a 'revolutionary situation' and causes the Idea to explode into the actual.<sup>45</sup>

Thought's survey of the structural multiplicity thus brings about the ordinal and progressive determination<sup>46</sup> of the relations and singularities that constituted its internal difference, spatializing, temporalizing, and ultimately actualizing the idea in the '*Kairos*' of a 'sublime occasion'.<sup>47</sup> It is here that we find the 'theatre of problems' wherein thought individuates itself by individuating the idea, in an operation that could be considered in terms of another anti-essentialist perspective, that of the interactionist constructivism we encountered in Chapter 5. Within what Deleuze calls the faculty of pure thought, this is the juncture at which the problem of individuation, understood as the point of convergence between structure and genesis, is inseparable from a transformation of the thinker: 'To what are we dedicated if not to those problems which demand the very transformation of our body and our language?', he asks. In other words, what are we concerned with, if not with those experiences of the virtual as preindividual field which, defining the task of transcendental empiricism, demand hazardous individuations of thought and thinker at once?

Though we will return to these questions, which directly concern the relationship between the question of individuation and Deleuze's so-called practical vitalism,<sup>48</sup> we should not ignore that, whilst perhaps indiscernible in the last instance, this genesis of the thinker is distinct from (or at least not wholly superimposable onto) that of the ontology of anomalous individuation and its materialist concern with the genesis of the intellect. From the perspective of this latter stance, which we first encountered in Nietzsche's 'materialism without matter', the transformation of the thinker, whilst perhaps a *de facto* propedeutic to the ontology, as well as a potentially superior philosophical *desideratum*, must be subjected to the asymmetry of the preindividual *vis-à-vis* a thought that always begins in the midst of the actuality of beings and the individuality of the thinker – hampered as he or she is by the objective illusions of representation and the generalizing adaptations of habit. It might be instructive in this light to compare Deleuze's neo-structuralist proposals to the two other models of anomalous individuation presented herein – Peirce's habit and Simondon's transduction – in terms both of the question of asymmetry (the outline of generative procedures heterogeneous to representation and its systems of identities) and determination (the capacity to differentiate the real without making recourse to transcendent principles of individuation that would anticipate becoming).

Both of these densely intertwined questions pose significant challenges. The most difficult one has to do with the relationship between genesis and cause. As we noted, it is between these two concepts that Deleuze

chooses to inscribe the dissymmetry of individuation. As he bluntly states in one of his seminars on Leibniz and Whitehead: 'A genesis is not causal.'<sup>49</sup> What makes this issue so vexed is the question of which of the two procedures (genesis *or* causality) is to be given priority at the level of a theory of individuation, and, moreover, how this difference is even to be articulated in the first place. This is especially so in *The Logic of Sense*, where we are confronted with the non-parallel correlation or disjunctive synthesis of a non-causal genesis – inasmuch as sense is an impassive effect or event at a sovereign remove from its actualizations – and a non-genetic causality whereby corporeal causality would determine an extensive regime devoid of any transcendental account. Far from revealing a hidden malfunction at the heart of Deleuze's enterprise, this problem is used to drive the paradoxes out of which *The Logic of Sense* is woven, thus characteristically situating the vitality of difference at the heart of a seemingly impossible heterogeneity. Sense itself would thus constitute the Janus-headed surface synthesizing these two disjointed systems (of bodies and of ideas) and allowing their communication.

Deleuze asks: 'How can we maintain both that sense produces even the states of affairs in which it is embodied, and that it is itself produced by these states of affairs or the actions and passions of bodies (an immaculate conception)?' It is worth quoting his answer in full:

The idea itself of a static genesis dissipates the contradiction. When we say that bodies and their mixtures produce sense, it is not by virtue of an individuation that would presuppose it. Individuation in bodies, the measure in their mixtures, the play of persons and concepts in their variations – this entire order presupposes sense and the preindividual and impersonal neutral field within which it unfolds. It is therefore in a different way that sense is produced by bodies. The question is now about bodies taken in their undifferentiated depth and their measureless pulsation. The depth acts in an original way, *by means of its power to organize surfaces and to envelop itself within surfaces.*

Yet what ultimately permits this 'heterogeneous synthesis of the condition in an autonomous figure binding to itself neutrality and genetic power'<sup>50</sup> is, as Deleuze notes, an unconditioned instance. The communication of the different with the different – the system of bodies and the system of propositions in this case – is not a procedure that could be qualified by the same immanence that characterized Simondon's transductive relationality. Or rather, what Deleuze encounters in his deployment of the consequences of structuralism as the philosophy of internal difference is

the necessity – over and above idea-multiplicities as the bearers of internal difference – of a speculative instance that would permit the productive communication between ideality and actuality, propositions and bodies. It is arguably in order to ward off a return of identity and resemblance, of the ‘catastrophic’ theory of specific individuation that subtends the philosophy of representation, that Deleuze introduces his theory of the dark precursor or the disparate (in *Difference and Repetition*) and of the quasi-cause or aleatory object (in *The Logic of Sense*).<sup>51</sup>

At the vertex of structure we thus encounter the problem of difference-in-itself; the positing of this paradoxical entity which, whilst it ‘fails to observe its own identity, resemblance, equilibrium, and origin’ [*elle manque à sa propre identité, elle manque à sa propre ressemblance, elle manque à son propre équilibre, elle manque à sa propre origine*], is nevertheless what assures the communication of series, what stops the necessary moment of the positing of differences in kind from ‘degenerating’ into a mere categorial distinction.<sup>52</sup> Once again, the philosophical imperative turns out to be that of safeguarding internal (or individuating) difference: no longer as an individual notion, nor as the virtual multiplicity of an idea, but *as such*.<sup>53</sup> However, it is quite difficult to see how this ‘differenciator’, albeit deprived of any self-identity, can refrain from constituting a totalizing structural principle upon which differences themselves would in turn depend. In other words, once the communication between series demands a paradoxical intermediary, how is one to stop the slide towards an ultimate Differenciator, a pure *principle* of anarchic production?

Whilst Deleuze, in light of the theory of multiplicity, often notes that the One and the Multiple are themselves both to be redescribed as determinate kinds of multiplicity,<sup>54</sup> it is not at all clear how this virtual object = x, this *empty place* which is everywhere and nowhere at once and *assures the communication of differences with differences, multiplicities with multiplicities*, can itself be considered as a multiplicity. This is especially the case if we consider that, in its infinite movement through all the systems of difference, it appears as itself devoid of dimensions and singularities. This strictly *exceptional* character of the instance that Deleuze had introduced in *The Logic of Sense* as ‘Lacan’s paradox’, and which is defined in *Difference and Repetition* as the *differenciator*, appears to reinstate the very principial economy that Simondon’s critique of classical and modern models of individuation had sought to suspend. Though it is no principle of individuation (perhaps far more of a *principle of anarchy*, like the one Reiner Schürmann provocatively extracts from the later Heidegger)<sup>55</sup>, the disjunctive synthesis it operates between the

system of ideal genesis and the order of corporeal causes, as well as between differential systems themselves, does appear to crown it as the unconditioned of any possible individuation, be it in the paradoxical role of a principle that would unground all others. The question that rears its head at this juncture, especially by way of contrast with the approaches to individuation outlined in Chapters 4 and 5, is this: Do 'anomalous' processes of individuation – emerging out of the heterogeneities in the mechanisms of production, out of the generative communication of the different with the different – demand the *guarantee* of a principle, however paradoxical this principle might be? Is the hegemony of the philosophy of identity and representation such that its apparatus of good sense and common sense can only be undermined by the affirmation of the chaosmos of difference *qua principle*?

In Deleuze's reconstruction of structuralism as a philosophy of difference based on the concepts of multiplicity and static genesis, we have already met with a potent contribution to the development of a transcendental philosophy (a transcendental materialism) of preindividual being, conceived as the account of the determination and determinability of a *non-empirical real* and of its role in processes of ontogenesis. Arguably, the deficiency of such an approach is that, save for the sublime intervention of a Dionysian thinker, it does not sufficiently delineate the becomings investing the transcendental field itself, or explain the sense in which the latter is itself the site, and not just the source or quasi-cause, of syntheses and variations. Moreover, by establishing a disjunction between regimes of individuation and by articulating the demand that the transcendental field not collapse into a categorial distinction, this structuralist moment in Deleuze's philosophy of difference forces the recourse to an operator of heterogenesis (the differentiator) which ultimately betrays the promise of the theory of multiplicity; to wit, that the generative communication of differences could provide the clue to a philosophy of individuation purged of principles.

It is nevertheless imperative to note that the 'structuralist' thesis of the paradoxical entity is, in our view, far less of a necessary component to *Difference and Repetition* than to *The Logic of Sense*. The disjunction between the virtual and the actual in the former is in fact a disjunction internal to, and generated by, the processes of ontogenesis themselves. Considered in terms of the production of discrete out of continuous multiplicities, of the movement from preindividual singularities and the reciprocal relations of implicate dimensions to a taxonomically amenable order of individuality, it does not seem to require the same solution that the singular problem of bodies and propositions had posed for Deleuze's

inquiry into the event of sense. It was only in the latter that the notion of a *quasi-cause* appeared as a more consequent and, indeed, necessary proposal. Yet, if we are to consider the conceptual resources present in Deleuze for an ontology of anomalous individuation, we cannot rest content with what I would call the *sufficiency of the virtual*; that is, with the notion that the asymmetry of ontogenesis entails that its process is a unilateral one, entirely driven by the virtual as its creative pole. Whilst this interpretation has much to recommend it, from the point of view of the problem of individuation to remain at the level of a stark opposition between virtual differentiation and actual differentiation would almost suggest that actualization is but the incarnation of a preconstituted form. The philosophy of difference really confronts the problem of individuation only when the movement of internal difference is defined as an 'indi-different/ciation';<sup>56</sup> that is, as a process that requires the *dramatization* of internal multiplicity in intensive systems and spatiotemporal dynamisms. It is in this facet of Deleuze's thought that his contribution to the philosophy of individuation becomes most apparent. It is also, significantly, that aspect of his approach to the question of internal difference that his later repudiation of some of the criteria of structuralism leaves essentially untouched.

### 6.3 The rhythms of immanence: haecceity, intensity, subjectivity

In *A Thousand Plateaus*, Deleuze and Guattari distinguish two approaches to the transcendental ontology of individuation, by way of the difference between the *plan(e) of organization* (*plan d'organisation*) and the *plane of immanence* (*plan d'immanence*):

You can see the difference between the following two types of propositions: (1) forms develop and subjects form as a function of a plan(e) [*plan*] that can only be inferred (the plan[e] of organization-development); (2) there are only speeds and slownesses between unformed elements, and affects between non-subjectified powers, as a function of a plane that is necessarily given at the same time as that to which it gives rise (the plane of consistency or composition).<sup>57</sup>

It is on the basis of this distinction that Deleuze and Guattari try to oppose their Spinozist concern with *composition* to the preoccupation with *organization* that they identify as the original sin of structuralism. Rejecting organizational ontologies of individuation on the basis of

their structural and genetic deductions of individuality from predetermined and transcendent bases, they offer in alternative another mode of individuation, which, in homage to Scotus, they term *haecceity*.

Though much of the terminology has been transformed and Deleuze's previous attempt at recasting structuralism as a philosophy of ontogenesis appears to have been abandoned or even repudiated, this later position is still thoroughly determined by the ontological thesis regarding the two types of multiplicity. A haecceity is, in fact, defined here as an individuation which, eschewing the universality of forms or the abstraction of structures, directly composes 'flat' multiplicities with one another. The terrain seems to have shifted considerably with respect to the earlier preoccupation with conditions of realization – a preoccupation that seemed to afford a certain continuity with naturalized or materialist accounts of ontogenesis. The individuations that Deleuze and Guattari foreground in *A Thousand Plateaus* are not of the sort that engender individuals; rather, they traverse already constituted individuals, drawing them towards impersonal becomings, compositions of one multiplicity with another: 'A season, a winter, a summer, an hour, a date have a perfect individuality lacking nothing, even though this individuality is different from that of a thing or a subject.'<sup>58</sup> It is as if, rather than reconfiguring the domain of transcendental production from the inside, by revealing the anomaly and heterogeneity lying *beneath* the individuated, Deleuze and Guattari were opening out a dimension *beside* that of constituted beings, a fugitive world of pure intensities, alliances, and transformations – a world that is no longer the *sufficient reason* of difference, but its *construction* and *experience*: 'Here, there are no longer any forms or developments of forms, nor are there subjects or the formation of subjects. There is no structure, any more than there is genesis.'<sup>59</sup>

Whilst this goes some way to demonstrating that the idea of structuralism as a 'new transcendental philosophy' has, to a considerable extent, been left behind, it can also be understood to represent a displacement of some of the themes characterizing Deleuze's work of the late sixties. This is especially clear if we consider that what distinguishes the kind of individuation (the multiplicity) that Deleuze and Guattari call haecceity is nothing but that which *Difference and Repetition* had identified as spatiotemporal dynamisms, in other words, 'agitations of space, excavations of time, pure syntheses of speeds, directions and rhythms'.<sup>60</sup> A haecceity is in fact '*defined only by a latitude and a longitude*: in other words the sum total of the material elements belonging to it under given relations of movement and rest, speed and slowness (longitude); the sum total of the intensive affects it is capable of at a given power or degree of potential (latitude).'<sup>61</sup>

It was through the concept of intensity that *Difference and Repetition* had, in fact, approached the role of 'speeds and slownesses' in individuation, presenting spatiotemporal dynamisms as the operations that dramatized structural ideas and effectuated the communication of heterogeneous intensities, constituting those 'signal-sign systems' mentioned in Chapter 5. In *Difference and Repetition*, as well as in the essays on structuralism and dramatization immediately preceding it, the theory of individuation was enlisted to account for the way in which the differences implicated in structure, together with the disparateness marking intensity, could account for the passage from heterogeneity and internal difference to the sort of explicated world which is made available for the operations of representation. The very movement from internal to external difference found in these pure operations its 'agents', the factors permitting the passage from the impassivity of structure to the intensity of systems;<sup>62</sup> and from these systems or fields of individuation to the entropic and extensive realm of representation. Without the determination afforded by these individuating factors, the asymmetrical genesis moving from virtual structures to constituted individuals would be not just static, but purely ideal, or even idealist. This is why Deleuze – faithful to Simondon's project of a theory of operations at the basis of ontogenesis – thinks that spatiotemporal dynamisms

are precisely *dramas* ... [T]hey create or trace a space corresponding to the differential relations and to the singularities to be actualized ... The world itself is an egg, but the egg itself is a theatre: a staged theatre in which the roles dominate the actors, the spaces dominate the roles and the Ideas dominate the spaces.<sup>63</sup>

In this consideration of spatiotemporal individuation, Deleuze demonstrates that any account of real genesis, which begins from 'the Unequal in itself, *disparateness* as it is comprised in difference of intensity, in intensity as difference' – that is, any account of *anomalous* individuation – must delineate the *operations of individuation*, such as they determine the division and recomposition of intensive multiplicities.<sup>64</sup>

The theory of spatiotemporal dynamisms, which opposes the dramatization of ideas to the knowledge of essences, can thus be understood as the application of a Simondonian theory of individuation to the new transcendental philosophy of difference that Deleuze, following his heretical traversal of the history of philosophy,<sup>65</sup> had outlined in his singular reading of structuralism. In this theory, the constitution of intensive systems characterized by the interaction of individuating



factors obviates the structuralist temptation, still at work in *The Logic of Sense*, of positing an asymmetrical duality between actual (material) causation and static (ideal) genesis. The centrality of disparateness (or difference of intensity) means that realization is never an instantiation of a transcendent essence, but rather depends on the incalculable agency of preindividual factors, such that 'movement does not go from one actual term to another, nor from general to particular, but – by the intermediary of a determinant individuation – from the virtual to its actualization'.<sup>66</sup> It is here, in the distinction between individuation and actualization (differentiation), as well as in the role accorded to the latter, that the *sufficiency of the virtual* which Deleuze's encounter with structuralism had threatened to impose is, to a certain extent, countered.<sup>67</sup> The dissymmetry of the components of virtual structures has to be joined to the real disparities at work in intensive systems for the real operations of anomalous ontogenesis to receive due consideration. Not only must the internal difference of structural multiplicities be taken into account, but also the *rhythms* whereby they come to be divided and eventually find themselves sedimented in the specified articulations of a representable reality.<sup>68</sup>

The importance of this theory of individuation as dramatization to Deleuze's thinking as a whole is definitively proven by the fact that when he decides to abandon the structuralist project of a new transcendental philosophy, he does so by ascribing primacy, both in an ontological and an ethical sense, to those very spatiotemporal dynamisms through which he had applied Simondon's theory of individuation to the problematic of internal difference. In *A Thousand Plateaus*, with the attempt to think intensive multiplicities and their disparate relations (compositions, assemblages, becomings, and so on) on a plane of immanence, it is as though Deleuze and Guattari had generalized the ontology of anomalous individuation in such a way as to have done with any transcendent determination or sufficiency whatsoever. The dynamic operations through which multiplicities communicate and become no longer organize or *incarnate* anything beyond the immanent relations between their individuating factors.<sup>69</sup> By consigning the individuation of the entire regime of intensive multiplicities to the 'speeds and affects' of haecceities, Deleuze and Guattari are thus doing nothing but making the drama of being entirely immanent. Anomalous individuation – individuation of and from the Unequal, integration whose only materials are disparate intensities and preindividual singularities – is thus configured as a dramatization that no longer refers to anything other than its own movements, its own compositions.

Another way of thinking the impasse of structure for an ontology of anomalous individuation, above all as it is declared and diagnosed in *A Thousand Plateaus*, is that, much like the 'ghost-in-the-machine machine' criticized by Oyama (see Section 5.3), structure always functions with the sovereign autonomy of a plan of organization, of a code or programme that is both blueprint of production and instigator of genetic sequences. Now, it is not enough for the structure as ideal or virtual multiplicity to be stripped of any resemblance from the actual products that it induces, in line with the thesis of asymmetry highlighted at the very start of this book. The heterogeneity in the production mechanism cannot simply refer to its internal difference, but must be extended to the claim that there is no unilateral emanation of beings, no ontological preformism whereby heterogenesis would be nothing but a linear unfolding of implicate structure, or the expression of some primal formative force. It is interesting to note that at those junctures where Deleuze gives sustenance to the hypothesis we referred to as that of the sufficiency of the virtual, he reintroduces the autonomy of a *subject* of production. In his 1956 essay on Bergson, the virtual is symptomatically and polemically, if a little perversely, portrayed as Hegel's programme *realized*: 'Duration, tendency is the difference of itself with itself; and what differs with itself is *immediately* the unity of substance and subject.'<sup>70</sup> And, in his article on structuralism, Deleuze writes: 'the true subject is the structure itself: the differential and the singular, the differential relationships and the singular points, reciprocal and complete determination'.<sup>71</sup> But is it really adequate, given the determination of the preindividual as a multiplicity which is in itself dissymmetrical, and therefore not *autonomous*, to postulate an ordinary subjectivity (be it an exclusively inhuman one) at the heart of the processes of individuation? Is this inhuman subject, whether tendency or structure, really the sufficient reason of becoming? Despite the statements just quoted, I think the answer must be negative. The reason why can be found, once again, in the essay on structuralism. In its conclusion, Deleuze moves beyond his initial equation of structure with subject, providing us with a far subtler articulation of the two terms:

Structuralism is not at all a thought that suppresses the subject, but a thought which systematically fragments and distributes it, which contests the identity of the subject, which dissipates it and makes it pass from place to place, this always nomadic subject, made of individuations, but impersonal ones, or of singularities, but preindividual ones.<sup>72</sup>

So what we are finally presented with is the threefold articulation of structure, subject and paradoxical object. In this light, the latter is no longer the sole and autonomous principle of heterogenesis. It demands to be accompanied or doubled by a subject. We can thus see that, far from simply positing the autonomy of a virtual regime, this interpolation of subjectivity is related to the necessity of a dramatization without which the internal difference of the ideal multiplicity would, in the final analysis, be sterile. In other words, the ideal events that populate structure, as so many preindividual singularities, are doubled by a subjective event that accounts for the explosion of one structure and the determination of another. Though in a first moment the empty place or paradoxical object appears sufficient to explain structural mutations, we think ourselves justified in seeing this introduction of the subject as the indication of the necessity of dramatization, limiting the putative sufficiency of the virtual. Deleuze calls this the question of *praxis*, and together with subjectivity, glimpses in it the criteria of the future, criteria he will arguably bring to bear in his work with Guattari, as well as in the ethics that we will briefly turn to in the conclusion. From the strictly ontological, or better, ontogenetic standpoint of our investigation, it is important to reflect upon this question of *praxis* as the ‘point of mutation’ that allows us to think the process of individuation as potentially transformative of ideality itself; displacing the very constraints of actualization, and thus allowing for a real critique of the ‘ghost-in-the-machine machine’ that still pertains to structuralism. Such a focus on subjective dramatization, on the individual as thinker, arguably provides a privileged avenue into the following question: How are ideal multiplicities themselves individuated? Or, is there a genesis of *structure*?<sup>73</sup>

#### 6.4 Functionalism and the ontology of relations

The limits of structuralism as a transcendental philosophy of individuation – first introduced by the theme of *dramatization*, then countered with the notion of *composition* – can be considered anew in terms of its relationship to the Kantian antinomy of organization, the negative, ‘archaeological’ matrix of our inquiry. This is yet another case where, as Badiou astutely notes, Deleuze ‘erects the machinery of categorial oppositions only to determine the point that subtracts itself from it, the line of flight that absorbs its apparent extremes’.<sup>74</sup>

In the *Anti-Oedipus*, Deleuze and Guattari return to that great *topos* of post-Kantian biophilosophical dispute, the mechanism/vitalism controversy, in order to illustrate the *intrinsic* relationship between machines

and desire, between the relational individuations of production, on the one hand, and the formative force, on the other. In their view, both a power of desire simultaneously miraculated from and determining the functioning of the machine (a vital principle), and a machine supposed to secrete desire as a mere epiphenomenon (mechanism), fail to account for that crucial problem in the philosophy of nature: the interpenetration of form(ation) and function(ing). Not only do Deleuze and Guattari denounce the failures of such a dualistic tenet, they undermine and displace the very source of the problematic, that 'indexical vitalism' which first identified and insisted upon the unity of organization in the living.

Once again, the question turns out to be essentially mereological, caught up in an ontological decision regarding the relationship between wholes and parts. Both the machine as unified structure abstracted from the organism, and the vital principle as unitary formative force, are conceived under the sign of a totalizing principle. This principle subsumes what, by the same movement, it comes to configure as parts and functions. The latter thus find their ultimate reason in the principle as a supplementary and detached instance, as the *plan of organization* mentioned above. But, as we noted already, the common mereological foundation of these apparently juxtaposed biophilosophical theses is simultaneously discerned and undermined once we approach the question from the standpoint of an ontology of multiplicity. Intensive multiplicities may enter into relation – be transformed, merged, and so on – but they cannot be partitioned without changing in kind. Totalities themselves must be understood in this sense, and though they may be *represented* as containing their parts without remainder, from an ontological standpoint, based on the relations of the different to the different, the whole/parts relation as it is classically defined appears as a major obstacle to the elaboration of a philosophy of difference, or of differential production. As Deleuze and Guattari write:

We believe only in totalities that are peripheral. And if we discover such a totality alongside various separate parts, it is a whole *of* these particular parts but does not totalize them; it is a unity *of* all these particular parts but does not unify them; rather it is added to them as a new part fabricated separately.<sup>75</sup>

Besides, both mechanism and vitalism isolate more or less actual individuals and adopt them as the *explanans* of ontogenesis. As Deleuze writes: 'The former assumes that everything is calculable in terms of a state, the latter, that everything is determinable in terms of a program.'<sup>76</sup>

The point of dispersion whereby this dualism comes to be traversed and undermined lies in the destitution of the organism as homeostatic, transcendently ordained unit and its reconfiguration as provisional individuation drawn upon a field of multiplicities, bound(ed) and unbound(ed) as an effect of differential relations.<sup>77</sup> As Nietzsche had argued contra Kant it is only once the concept of totalized unity is imposed on the living, once life is defined as *organism*, that matters of finality and questions regarding (transcendent) principles can emerge. Samuel Butler, whom Deleuze and Guattari refer to as the intellectual godfather of this displacement of the dichotomy is seen to ‘*shatter the vitalist thesis by calling into question the specific or personal unity of the organism, and the mechanist argument even more decisively, by calling in question the structural unity of the machine*’.<sup>78</sup> Two machinic regimes, molecular and molar, thus come to replace the initial dichotomy of organism and machine. That dichotomy is itself entirely repositioned on the level of the molar, of that ontological domain defined by its segmentarity, classifiability and ultimate reference to transcendent principles or programmes of organization. Following this terminological and methodological shift, the conflicting theses of the vitalist and the mechanist only pertain to the molar regime, where the internal difference of individuality is decomposed and ordered according to extrinsic principles; but that regime itself, in line with the doctrines of the two kinds of multiplicities and of the dissymmetry of production, is an expression of constraints generated by its counterpart, the molecular. To the extent that this second regime functions as a transcendental field, it roughly overlaps with the virtual of *Difference and Repetition*. In both, multiplicities are beyond totalization. Moreover, individuation is now to be thought in terms of *haecceities*, which is to say kinetically and topologically, as a concretion of speeds and affects; not hylemorphically (like the organism) in terms of the in-formation of matter.<sup>79</sup> It is important to note that Deleuze and Guattari explicitly remark that ‘there is no difference in kind’ between the molecular and the molar regimes.<sup>80</sup> Needless to say, this does not preclude that there may be modalities and phenomena specific to each regime.<sup>81</sup> In particular, viewed from the angle of the ontology of individuation, the molar represents a tendency towards *organization*, whilst the molecular is characterized by operations or events of *composition*.

Deleuze and Guattari thus remark, following the French thinker Raymond Ruyer, that it is at the molecular level alone that function and formation become indiscernible. In terms of the question of the living, at the level of the *body* multiplicities act so that the process of

production is at one and the same time its product, while for the *organism* the product transcends its own production. The functional *structure*, together with the determining individualities (state and programme) postulated respectively by mechanism and vitalism, cannot account for their own production, and necessarily appeal to heterogeneous principles in order to infuse life or to specify tasks. It is of the utmost significance that Deleuze and Guattari refuse to ascribe this indiscernibility of product and production, function and formation, to the circumscribed individual as homeostatic, self-reproducing, self-referential entity.<sup>82</sup> In such an organismic model, the interpenetration of the polar categories (form/function; product/production) would be merely *postulated* with regard to the (living) entity which an indexical vitalism had isolated, in a merely *problematic* sense.

In these organismic doctrines of functional autonomy, so strenuously opposed by Deleuze and Guattari, the individuated entity becomes a black box, a *Ding an Sich* autistically withdrawn from any form of examination or relationality. Once again, the hidden link between organizational autonomy and eidetic heteronomy becomes evident: any organizational closure, if conceived of as being without remainder, bears its unity in the form of an external product, or rather as an exterior totalization. The potentiality of the individual is totalized, and thereby actualized into a separate entity, a principle that the organism carries within it. The presupposition of a stable or even metastable entity cannot sustain the variation and metamorphosis entailed by the equation  $\text{PRODUCT} = \text{PRODUCTION}$ , for the precise reason that, in a process of *recursive evolution*, the structural unity is itself a provisional effect of conditions which are themselves open to amendment, as we pointed out in Chapter 4.<sup>83</sup> The boundedness and centralization of such an entity could only be immune to such interminable material modulation were it to be posited as supplementary or transcendent. Conversely, in a machinic consideration of individuation we must regard both organism (system) and part (component or subsystem), as well as process and (provisional) result, as either resonant or reciprocally determining. This is at the core of the notion of modulation, which Deleuze, following Simondon quite closely, will juxtapose to the hylemorphic fixity of an identical mould applied to a homogenized matter.<sup>84</sup>

On the basis of the foregoing discussion, we can now isolate three propositions: (1) a true *functionalism*, according to Deleuze and Guattari, only operates at the level of the molecular; that is, within that domain in which continuous multiplicities define the reciprocal immanence of structure and becoming in the absence of any preconstituted terms

(be it state or atom, programme or unit of information); (2) *totalities* are not inclusive of parts, but rather function as adjoined terms: the ‘whole’ is just another multiplicity that enters into relation, or is produced by, those multiplicities that subsequently come to be represented as parts; (3) the continuous multiplicities that permit an approach to ontogenesis diagonal to the distinction between autonomy and heteronomy are characterized by *dissymmetry*; that is, they are composed of dimensions that cannot be permuted; they are multiplicities for which any operation constitutes a change in kind, which is why Deleuze and Guattari can consider the concept of (continuous) multiplicity as synonymous with becoming.

These three propositions can provide a brief counter to some of the fundamental arguments in Manuel DeLanda’s *Intensive Science and Virtual Philosophy*, arguably the most comprehensive and ambitious work to date to have considered Deleuze’s work from the standpoint of an ontology of individuation. DeLanda, aiming to present a Deleuze who is both the nemesis of essentialism and the harbinger of a metaphysics worthy of current research in mathematics and the natural sciences – precisely to the extent that Deleuze allows us to consider ‘*immaterial entities* whose job is to account for the genesis of form’<sup>85</sup> – bases his exposition of Deleuze’s theory of multiplicities on the assertion that they are both ‘mechanism-independent’ and ‘stimulus-independent’. This amounts to espousing a functionalism which, if closely investigated, is unlike that of Deleuze and Guattari: in DeLanda ‘actual’ matter would provide the field of application for formal structures that are themselves invariant across actual domains. Interestingly enough, DeLanda wishes to retain this thesis, whilst also defending a position whereby ‘the resources involved in individuation processes are immanent to the world of matter and energy’, arguing further that ‘the virtual is produced out of the actual’.<sup>86</sup> We are thus thrown back onto the difficulties, implied by some of the founding criteria of structuralism, that had beset the separation of cause and genesis in Deleuze’s philosophy. Where Deleuze’s doctrine of the differentiator seemed to push him into the forbidding territory of the third synthesis and the (de)individuation of the thinker, DeLanda’s entire aim is to reconfigure Deleuze’s work as an *ontology of modelization*. This is why so much emphasis is placed in *Intensive Science and Virtual Philosophy* on the idea of phase space, but it is also why DeLanda can permit himself to introduce notions such as possibility, probability and predictability which are, to all intents and purposes, alien to the Deleuzian system.

The specific source of DeLanda's 'deviation' from Deleuze's theory of multiplicities, as well as of its application to the modelling practices germane to contemporary systems theory, has to do with DeLanda's usage of the theory of groups. This theory, which had also served long before as the royal road to structuralism for Piaget, poses a significant problem with respect to the ontology of individuation. As DeLanda writes:

The term 'group' refers to a set of entities and a rule of combination for these entities. The most important of the properties is the one named 'closure', which means that, when we use the rule to combine any two entities in the set, the result is an entity also belonging to the set.<sup>87</sup>

This set is defined by its permutations and by a degree of *symmetry*, which is itself defined by the number of operations the set or group can undergo whilst remaining invariant. On this basis, DeLanda plausibly turns to 'symmetry-breaking bifurcations' as a model of differentiation appropriate to the Deleuzian ontology.

Whilst DeLanda is by no means insensitive to the asymmetry of production in Deleuze (the 'ontological difference' between virtual and intensive, intensive and extensive), providing ample demonstration of the speculative and empirical force of this crucial tenet of Deleuzian ontology, he seems to invert what Deleuze referred to as 'the heterogeneity in the production mechanism'. The ontological consistency of Deleuze's continuous multiplicities is such that no permutational symmetry may be ascribed to them, the 'ideal connections' between their dimensions and the constellation of their singularities being entirely asymmetrical. The 'resolution' of these multiplicities in actuality is in fact *symmetry-producing* rather than symmetry-breaking, giving rise to the domain of extensive representations in which permutations that leave structures indifferent or invariant can take place. As Deleuze writes:

it is not the elements of symmetry present which matter for artistic or natural causality, but those which are missing and are not in the cause; what matters is the possibility of the cause having less symmetry than the effect ... The negative expression 'lack of symmetry' should not mislead us: it indicates the origin and positivity of the causal process.<sup>88</sup>

This ontological thesis concerning causality and the preindividual also bears on the question of modelling. The precise problem that arises



in linking virtual multiplicities to the concept of model is that only the former are capable of becoming. In other words, the question that arises with multiplicities is that of their relational ontogenesis or machinic composition, *not* that of their instantiation. One of Deleuze and Guattari's exemplifications is particularly topical here:

This has nothing to do with models, all models are molar: it is necessary to determine the molecules and particles in relation to which 'proximities' (indiscernibles, becomings) are engendered and defined. The vital assemblage, the life-assemblage, is *theoretically or logically* possible with all kinds of molecules, silicon, for example. But it so happens that this assemblage is not *machinically* possible with silicon: the abstract machine does not let it pass because it does not distribute zones of proximity that construct the plane of consistency.

Here, Deleuze and Guattari once again reiterate the methodologically primordial difference between conditions of realization and conditions of possibility, between internal difference and conceptual difference, which we have attempted to track throughout this chapter. As they go on to say, 'machinic reasons are entirely different from logical reasons or possibilities'.<sup>89</sup> It is the imperative of maintaining this difference, of affirming the wedding of singularity and the concept, that seems to have led Deleuze and Guattari to repudiate structuralism. It is also what makes us doubt the fidelity (though not necessarily the interest or the coherence) of an approach that would try to 'naturalize' the theory of multiplicities by recasting it as an ontology of models; much as if Deleuze were the heir of Husserl's metatheoretical project, now applied to the theory of complex systems. That is also the reason, however, why it seems that the last word on Deleuze's theory of individuation is perhaps to be found in a Spinozist ethics or pragmatics of composition, and no longer in the determination of sufficient reasons within a transcendental field of preindividual being.

Throughout the transformations we have tracked in Deleuze's thought, with and without Guattari, the ontological matrix provided by the theory of multiplicities is never abandoned, and, as I have been at pains to argue, provides the key to Deleuze's approach to the problem of individuation. Whilst DeLanda is unmatched in the formal elucidation and application of this relationship between multiplicities and individuation, he formulates an ontological stance that is quite unacceptable on the conceptual and terminological bases set out in this book. Such a stance is encapsulated in his affirmation of a 'flat ontology of individuals',

which is put forward in the context of DeLanda's treatment of biological species. It boils down to positing an ontology 'made exclusively of unique, singular individuals, differing in spatiotemporal scale, but not in ontological status'.<sup>90</sup> Now, unless virtual multiplicities are to be considered as both purely formal and *a posteriori* – the products of modelling processes and nothing besides – this stance utterly contradicts what DeLanda elsewhere describes as Deleuze's *realism* concerning the immateriality of the virtual.<sup>91</sup> Even if we are to consider this argument at the level of actuality alone, the problem remains with the adjective 'flat'. This term is of course used by Deleuze and Guattari to characterize rhizomatic multiplicities in *A Thousand Plateaus*. The latter are conceived as possessing no supplementary dimensions; they are beings of internal difference, in other words. But actual individuals are on these selfsame grounds anything but flat, they are *really* organized into classifiable systems, extrinsically constrained and, at least implicitly, subjected to the functions of representation (or, to use the vocabulary of *A Thousand Plateaus*, stratified). The only way DeLanda's thesis becomes coherent with Deleuze's theory of multiplicities is therefore in terms of the mereological considerations rehearsed above. DeLanda's aim is to substitute the species as an abstract universal with the species as a concrete entity. Thus, he considers the species–individual relationship as one of whole to parts, a relation he qualifies as causal: 'the whole emerges from the causal interactions between the component parts'.<sup>92</sup> Now, to the extent that DeLanda wishes to account for the operations of species on their own scale, and in terms of their own spatiotemporal dynamisms, this relationship which he defines as 'emergence' can be brought back to the non-inclusive difference posited by Deleuze and Guattari between 'whole'-multiplicities and 'part'-multiplicities. With these considerations in mind, let us now turn to another treatment of Deleuze's philosophy, one almost entirely concerned with Deleuze's fidelity to a Bergsonian notion of the whole.

### 6.5 *Asylum Ignorantiae?*

On the basis of my overarching view on the role of the problem of individuation in Deleuze's differential ontology, the foregoing delimitation of Deleuze's mereology, and my brief critique of DeLanda's 'model-functionalist' interpretation of Deleuze's work, I will now attempt to establish that Alain Badiou's recent attack on the virtual as *asylum ignorantiae* is founded on a systematic erasure of the role played by the question of individuation in Deleuze's work, and in particular of

the operative distinction between individuation and actualization.<sup>93</sup> I am not denying that Badiou's interpretative stance is corroborated by ample textual evidence. In fact, his reading will serve us as a means of separating out two tendencies within Deleuze's own work, tendencies that, whilst occasionally merging into one another, are nevertheless discernible *from the point of view of individuation*: (1) the search for an ethico-aesthetic *intuition* of Time as the Self-Differing; (2) the *construction* of a transcendental materialism that aims to provide the sufficient reason of production or ontogenesis. These could be seen as divergent tendencies rather than contradictory goals, in that they are both set out as paths towards the wedding of concept and singularity. They nevertheless exemplify the fact that behind a philosopher's choice of emphasis we can often glimpse the latent lineaments of genuine ontological or methodological prescriptions, which it is the task of interpreters and commentators to identify and enact.

It is in Deleuze's propensity to decouple the question of Time from that of material production that Badiou's refined offensive finds support for its claims. Ultimately, it is only by holding fast to the problem of ontogenesis or individuation, by not decoupling singularization from individuation, differentiation from differentiation, or temporalization from materialization, that Deleuze's philosophy can prevent its conceptual foundations from being sapped by Badiou's polemical operation.

To maintain this fidelity to individuation nevertheless entails a thoroughgoing interrogation of some of the chief tenets of Deleuze's Bergsonism. It means disturbing the asymmetrical gradation of the Bergsonian schema presented in Deleuze's 1956 essay, whereby duration is superior to memory which is in turn superior to the differentiation of the *élan vital*; it also demands addressing the crucial function of the drama of individuation in the general economy of production, discussed in *Difference and Repetition*, as well as the untotalizable heterogeneity of rhythms of *A Thousand Plateaus*. In order to offer a convincing reply to Badiou's critique, we might even need to betray the virtual of coexistence in order to save the virtual of production, or, to put it in a somewhat more technical fashion, we might be driven to affirm the anteriority of production as individuation (production of heterogeneous space-times inseparable from the rhythms of matter) over the question of Time 'itself', a possibility already hinted at in Whitehead's theory of events. We could thus say, with Simondon, that time, rather than being the envelope of all possible individuations, is the 'first of all transductivities', 'it emerges from the preindividual like the other dimensions in accordance with which individuation is effectuated'.<sup>94</sup>

Before dealing with this problematic articulation of time and ontogenesis in Deleuze's work, let us briefly review the key nodes in Badiou's negative assessment of the virtual, which he conceives as both the key concept in Deleuze's ontology and the locus of its ultimate inconsistency. Badiou's interpretation hinges on his notorious portrait of the thesis of univocity as a metaphysics of the One, a reading channelled by his emphasis on Deleuze's enduring fidelity to Bergson's philosophy, in particular to his method of intuition. This means that Badiou sees the relationship of the actual and the virtual (that is, the process of *differentiation*) as entirely exhausted by an account of what we could term *the atemporal production of the temporal*. As I have already remarked, far from contravening Deleuze's textual indications, Badiou is faithful to the letter of numerous instances of Deleuze's own treatment, including the posthumously published fragment 'The Actual and the Virtual'.

As we read in the second part of the latter: 'in all these cases, the distinction between the actual and the virtual corresponds to the most fundamental scission in Time, when it moves forward by differentiating itself according to two great paths: to make the present pass, and to conserve the past'.<sup>95</sup> It is the paradoxes encountered by an account of the passing of time based purely on the contraction of the present (the paradox of contemporaneity and the paradox of coexistence) – an account that Deleuze, in *Difference and Repetition*, calls 'intratemporal'<sup>96</sup> – that direct us towards the envelopment of the passive synthesis of habit by the active synthesis of memory, issuing then into the diagram of memory as the virtual coexistence of all the degrees of difference; memory configured as the Bergsonian cone, containing and conserving the sufficient reasons of all instances of actualization. It is in this interrogation regarding the being of time that the defining characteristics of the virtual can be seen to emerge.

Nonetheless, as Badiou himself realizes, an ontology of temporality must of necessity be an ontology of production, or, to use a term from *Difference and Repetition*, an ontology of 'progressive determination'. As Deleuze writes:

by virtue of this progressivity, every structure has a purely logical, ideal or dialectical time. However, this virtual time itself determines a time of differentiation, or rather rhythms or different times of actualization which correspond to the relations and singularities of structure and, for their part, measure the passage from virtual to actual.<sup>97</sup>

But what is the nature of this passage? Of its immanent, and necessarily 'metrogonic', measurement? It is on this question of determination that

Badiou brings his critical arsenal to bear. As he lucidly sets out in the chapter of *The Clamor of Being* dealing with the virtual, echoing Deleuze's own claims in *Difference and Repetition* and elsewhere, the virtual cannot be confused with the possible, on pain of making the sufficient reason of production into the unalterable matrix of a continuous creation; neither can it be confused with the potential, which would affect the virtual with the nebulous germinality of Aristotelian matter.<sup>98</sup> As Badiou readily recognizes, the virtual must itself already be determinate; it is the nature of this determination that was, of course, the object of the theory of ideas which we briefly encountered in Section 6.2.

The exhaustive determination of the virtual is thus the first requirement of Deleuze's philosophy of the concept, guided as it is by the twofold polemic against the possible and the potential. The second requirement, which is the condition both for Deleuze's critique of representation and for the ascription of full ontological consistency to the virtual, is the *asymmetry* of the actual and the virtual: the virtual cannot resemble the actual; it cannot be retroactively extracted from the actual as its resemblance or analogy. The virtual is not the ontological shadow or phantom of the actual. The third requirement in the construction of a concept of virtuality is the non-categorical distinction of actual and virtual. In all his writings on Deleuze, Badiou stresses this crucial point: any slippage into a categorial distribution signals the ruin of the fundamental thesis of the univocity of being. Thus, it is the relationship (and putative tension) between the requirement of univocity and the virtual/actual distinction that lies at the core of Badiou's critiques. These bear most strongly on Deleuze's theory of the crystal image or of the 'smallest circuit'.

We shall disregard here Badiou's overall critique of the concept of the virtual image, based as it is on a very suspect reading of the notion of the simulacrum.<sup>99</sup> What needs to be focused on instead is his assessment of the role that the crystal image plays as a means of dissolving any categorial temptation within Deleuze's philosophy. This is the monist moment, as it were, within Deleuze's instantiation of the method of intuition. In both *Cinema 2* and 'The Actual and the Virtual', Deleuze is quite explicit regarding the function of the crystal image: to exhibit the plane of immanence as the locus of the indiscernibility-in-the-last-instance of the actual and the virtual. As he writes:

It is on the plane of immanence that crystals appear ... Pure virtuality no longer has to actualize itself because it is strictly correlative with the actual with which it forms the smallest circuit. It is no longer

possible to label things actual or virtual, the two terms exchange each other and become indiscernible.<sup>100</sup>

Echoing this passage is the claim, from 'Immanence: A Life ...', that a singular life can take place at a remove from individuation, that there is a life at the level of singularization which is essentially decoupled from its correlative individuations, its actual properties, specific traits, and such like.<sup>101</sup>

What is the result for Badiou of what he calls Deleuze's 'precarious theory of the Double'?<sup>102</sup> Ultimately, it is that the actual – in other words, the generated, the constituted, the individual – must be either be trapped with 'its' virtual in perpetual oscillation *or* be wholly reabsorbed into a virtual reality, thereby losing at once its objectivity, its reality, its determination. Having established the virtual as ground, the actual is either a modally differentiated simulacrum – that is, an impoverished and partial phantom of the virtual – or the sterile product of a unilateral production again determined by the virtual. For Badiou, the crystal image – in its attempt at a return to immanence beyond the threat of categorial distribution – by postulating an experience of the indiscernibility of the two terms, makes univocity depend on the Double. The result is that *neither* the formal difference of actual and virtual *nor* the ultimate monism attain the *desideratum* of consistency. However, the heaviest of Badiou's indictments lies in the implicit claim that the virtual 'undetermines' the actual, thus rendering the ontogenetic aspect of Deleuze's philosophy itself phantasmatic, as well as its claim to provide a speculative path 'to the singularities themselves'. So, is the virtual an *asylum ignorantiae*, the cipher of a contemplative philosophy that – in its attempt to sustain the thesis of univocity – induces the collapse of the cornerstone of any true ontology: the question of determination?<sup>103</sup>

The only way to challenge this assessment is to reintroduce into the question of the virtual the centrality of the concepts of individuation, progressive determination and ontogenesis. What allows Badiou to entertain the notion of an ultimate failure in Deleuze's system is the erasure of these questions in favour of an approach almost entirely concerned with the being of Time and with the ethico-aesthetic experience of Virtual-Being 'as such' – whether in the form of the crystal image or of the singularization of 'a life' through the dissolution of its actual properties. Turning to *Difference and Repetition* (though we could have also chosen the *Capitalism and Schizophrenia* volumes) it soon becomes evident that this treatment of the virtual completely enucleates the drive behind the constitution of an ontology of individuation which Deleuze

variously refers to as a 'new materialism', 'a new transcendental philosophy', 'a philosophy of nature' and 'a vitalism of signs and events'.

Let us force the alternative: Should we understand the virtual/actual distinction primarily via Deleuze's uptake of Bergson's paradoxes of time, or rather in terms of 'different/ciation', the generation of divergent and heterogeneous individuations with their correlative rhythms or space-times? Once again, the distinction that I am trying to impose – which only becomes pertinent when priority is given to the problem of individuation – turns out to be a matter of emphasis. Another way to approach this matter is through the following question: In the complex composition of *Difference and Repetition*, should we read the three temporal syntheses in terms of the spatiotemporal dynamisms as generative factors or vice versa? If the syntheses provide the *ratio cognoscendi* of difference, and the dynamisms the *ratio essendi*, should we not accord a qualified priority to the latter, if we are to remain faithful to one of the key tenets of the ontology of anomalous individuation, the genesis of the intellect? Likewise, a purely temporal characterization of the actual/virtual distinction would remain too general, too 'transcendental', if we aim to seize the role of the virtual within a philosophy of production. Stripped of any contraband psychologism, 'Time' as such – even if conceived through the creativity of Bergsonian duration – is still much too contentless a condition for production. The true conditions of realization, rather than possibility are to be sought at the level of the spatiotemporal dynamisms. As Badiou recognizes, univocity prescribes that we not conceive the virtual as an autonomous level or separate category – another 'empire within an empire' – but as a difference in kind which is revealed to express a degree or intensity of difference, and is therefore inseparable from the process of its actualization. It is only *within* this process that any distinction between the actual and the virtual becomes operative. This is why Deleuze does not cease stressing the specificity of the virtual ideas implicated in each domain of production or 'indi-different/ciation', as well as the repercussions of the dynamisms on their differential composition.

When we ask what an organism is, for example, we are asking after the being of a specific virtual idea – with its specific and determinate varieties and singularities. When we ask after the temporality of organismic life, we are interrogating the spatiotemporal dynamisms that govern the production of different individuations, in the guise of heterogeneous rhythms and of the productions of anatomical extensities or ethological territories. The actual is neither indeterminate nor unreal, but rather finds its sufficient reason in the manner that completely determinate

ideas (virtual multiplicities) are unfolded. This is a process of progressive determination which is productive of real, multiple and rhythmic temporalities. It is the indivisibility of a *material production of temporality* and a *temporal production of matter* that leads us to propose Kamps's notion of 'recursive evolution' as a fitting approximation of the virtual-actual circuit. If we are to take Deleuze seriously on the existence of Ideas in a realm such as that of biology – without rehashing the eidetics of autonomy that Nietzsche destroyed – we must affirm that, whilst the relationship between such ideas and their actualizations may be regarded as *asymmetrical*, it cannot be simply conceived as *unilateral*. The logical or noetic time of ideas cannot remain untouched by its dramatization. Unless we pay attention to this rhythmic dimension at work between, on the one hand, the 'aionic' duration of the Virtual Whole and the formal temporality of ideal multiplicities, and, on the other, the merely representational time of constituted actualities, the virtual/actual distinction will no longer appear as a key component in an ontology of production, but rather as a categorial distribution, operating within a treatment of time that all too closely resembles a condition of possibility – a sort of 'fanatical' extrapolation upon the Transcendental Aesthetic – rather than the sort of condition of realization sought by Deleuze.

As we have seen, Badiou's critique of the virtual is based on a negative assessment of the treatment of determination in Deleuze's ontology. The actual becomes phantasmatic and univocity is caught in a 'precarious theory of the Double' reliant on the final dissolution of the actual within memory as virtual totality. These claims can only be countered by carefully delineating the centrality of ontogenesis to Deleuze's differential ontology. We are tempted in this respect to introduce another temporal notion, in the guise of Simondon's transductive *a praesenti*, a heterogenetic 'dephasing' of time and matter by way of disparate and overlapping individuations. Unfortunately, the role of intensive individuation as the determining instance, as the 'intercessor' between virtual ideas and actual products, is just as absent from many of Deleuze's treatments of this question as it is from Badiou's book. This absence often leads Deleuze to portraying the virtual solely in terms of the being of Time, and results in the fatal decoupling of temporalization from the specific materiality of the processes of different/ciation. To focus solely on Time is to remain at a level of abstraction that erases the very reason for the concept of the virtual: the project of creating a non-representational theory of production or ontogenesis.

It is only to the extent that it engages in this decoupling that Deleuze's theory is vulnerable to Badiou's attacks. Determination cannot be dealt



with purely in terms of the being of Time. Perhaps we should state this more strongly, in a manner anticipated by the interpretation of Whitehead in Chapter 2: a differential account of production cannot simply depend on a concept of time, any more than it can depend on a concept of space, unless these two concepts are conceived of in terms of their production; that is, their embeddedness in processes of individuation and actualization. Individuation as the third term between the virtual and the actual, between differentiation and differenciation, is the key to extricating Deleuzian ontology from the charge of constituting an *asylum ignorantiae*. As Deleuze argues in the chapter 5 of *Difference and Repetition*, if we are concerned with looking beyond the constituted individualities which are the province of representation to the productive tendencies that they express, we cannot rest content with a turn towards an abstract impersonal ground. Instead we need to focus on individuations and preindividual singularities, on the speeds and affects that dramatize the virtual ideas and produce actual entities and their correlative space-times. Univocity should accordingly be recast in terms of a concept of ontogenesis that refuses any transcendence, emancipated from its excessive dependence on the abstract postulate of a virtual totality that both enfolds and neutralizes the production of actualities. It is *this* concept of *the* Virtual (and not of ideas as virtual multiplicities) that results in the derealization or indetermination of the actual identified by Badiou.

There can be no clearer symptom of this than the idea of the actual as a transcendence, as it transpires from Deleuze's two late fragments. Deleuze writes that this type of transcendence is a product of immanence. What ontological status are we to give to these sterile effects of a unilateral production, going *from* the virtual *to* the actual? Are they but transcendental illusions, serving as the correlate of a sovereign subject – itself a necessary fiction at best? Or are beings themselves powerless effects of the productive power of the virtual? If the latter, then we are simply – in accordance with the indictment running through Badiou's book – reinstating a 'creationist' variant of the ontological difference; the immanence of expression slides into the transcendence of emanative or transitive causation, and it matters little if the virtual is trans-ascendent or the actual trans-descendent (to borrow Jean Wahl's neologisms): the thesis of univocity cannot be sustained. We can easily see in this concept of the actual a direct descendant of Bergson's limit-concept of matter: a kind of impoverished and entropic sediment of the explosive life of spirit, about which Bachelard writes the following, incisive lines: 'the question arises as to whether in Bergsonism matter has enough

characteristics to meet the often contradictory diversity of its functions. It seems not. On the contrary one has the impression that for Bergson matter is identical to the failures it brings about.<sup>104</sup>

This characterization of the actual as a kind of failure, phantom or residuum of virtual production – underlined and stigmatized by Badiou's account and certainly suggested by some of Deleuze's own writings – results from forsaking the complex configuration of determinability, determination and determinacy which the leading concepts of Deleuze's ontology of anomalous individuation (intensity, dramatization, spatiotemporal dynamisms) bring to the comprehension of different/ciation or of the virtual/actual distinction. This erasure is derived, amongst other things, from Deleuze's fidelity to the Bergsonian schema of difference outlined in the 1956 essay – the one according to which duration encompasses memory which itself encompasses differentiation. It is also drawn from the provisional privileging of static over dynamic genesis exhibited by the most structuralist moments in Deleuze's itinerary. Perhaps the only way to sustain the demand of transcendental materialism – to think the individuality of the concept from the point of view of production and to forsake conditions of possibility for conditions of realization – is, along the lines sketched out by Simondon's philosophy of transduction, to reverse this schema. This would entail the affirmation that time can never be conceived as detached from its manifestation in the differential production of space-times which doubles every process of individuation. Echoing Bachelard's verdict on Bergson, we might say that of 'Deleuzism' we accept everything but (virtual) totality.

As we have tried to demonstrate, there are numerous resources within Deleuze's own thinking that allow us to curb the ontologically (and politically) conservative character of an enveloping temporal totality, and to emphasize the centrality, to any philosophy of difference, of a purely intensive communication of multiplicities, conceived as the sufficient reason of phenomena. One of these resources is to be found in what is perhaps Deleuze's most daring and complex intervention into the philosophy of time. As Véronique Bergen has suggested, Badiou's interpretation relies on the omission of the third synthesis of time as set out in chapter 2 of *Difference and Repetition*. What interests us here is, above all, the methodological or metaontological function of this inhuman experience of a pure form of time. By according transcendental status to the Nietzschean experiment of the eternal recurrence, it would appear to permit thought truly to access a domain of pure productivity and thereby to think the genesis of novelty (the 'future') free of the constraints of organismic perception or subjective representation.

Where habit draws generalities of difference from repetition, and memory grounds the actual particularity of the present in the virtual coexistence of the Whole, the third synthesis announces a pure form of time purged of any relation to particularity whatsoever, as well as extricated from the necessity of supplementary ordering principles, whether subjective or divine. Time as a virtual Whole is thereby revealed as still directed to and by the particularity of the present and its re-presentation. In short, it remains a *ground*. And, Deleuze writes: 'The shortcoming of the ground is to remain relative to what it grounds, to borrow the characteristics of what it grounds, and to be proved by these.'<sup>105</sup>

But what is the element within which the ontology of individuation could be seen to be at work here if, as I maintain, it is not that of the inclusive totality of a Virtual One-All? As I noted at the outset, it is the unequal, the *anomalous*. Though characterized in terms of totality, form, order and series, the third synthesis is nothing if not the destruction of every fixity obtaining at the level of the transcendental; an experience of ontological anarchy that lays waste to *conditions* and *agents* as factors legislating upon becoming. Devoid of all content and the correlate of an intensity = 0, this is a transfigured time that is nothing but the atemporal affirmation of pure, 'unprincipled' change. It 'has rid itself of the default of the condition and the equality of the agent in order to affirm only the excessive and the unequal, the interminable and the incessant, the formless as the product of the most extreme formality'. It thereby concerns 'excessive systems which link the different with the different, the multiple with the multiple, the fortuitous with the fortuitous, in a complex of affirmations always coextensive with the questions posed and the decisions taken'.<sup>106</sup>

These excessive systems are nothing other than the intensively generated signal-sign systems we first encountered with Simondon. The linking of the different with the different is the productive dimension that transcendental materialism tries to tap – beyond the subjective turn in experience and the objective illusions of entropy, representation and stratification. In this respect, the empty form of time, rather than signalling the detachment and separation of a pure virtuality, as one might initially surmise, provides the gateway to the spatiotemporal dynamisms. As Bergen writes, 'this Deleuzian upsurge of time in the third synthesis, catalysing the fracture of thought (which does not possess its being), poses the coincidence between ideal expression and the generation of being, between the gaze of the mind upon and the movement of engendering in things'.<sup>107</sup> It is *this* experience of time that, undermining the polar hegemony of the subject-object of representation,

allows an ontology of multiplicity to come to the fore. Only at this juncture, with the emergence of a 'system of the future', are principles of individuation as such suspended, since – as we have already witnessed with Kampis's recursive evolution, Peirce's natural history of laws, and Simondon's transduction – now 'there is no pre-existing rule, since the game bears already upon its own rules'.<sup>108</sup> For Deleuze, it is only once 'we' attain this experience of groundlessness that the domain of intensive systems beneath the stratified grids of representation and their transcendent principles of individuation opens up to thought. This is the apex of transcendental empiricism, Kant turned against Kant to unleash an experience of productivity in the pure form of a formless time: 'Time signifies a fault or a fracture in the *I* and a passivity in the self, and the correlation between the passive self and the fractured *I* constituted the discovery of the transcendental, the element of the Copernican Revolution.'<sup>109</sup>

However, unlike in Simondon, for whom the genesis of thought took place in a sort of constructivist relay of the processes of ontogenesis proper, or Peirce, for whom hypothetical construction (or, more precisely, abduction) was the lifeblood of our cosmogonic inquiries, Deleuze seems to demand from thought an inhuman transformation far beyond the modelizations offered by either of these thinkers, or indeed many of Deleuze's designated precursors. In order really to attain those generative, preindividual multiplicities that the system of representation systematically conceals, it appears that thought, via the formless form of the third synthesis, must undergo a deindividuation of its own, of the kind invoked by the 'dissolution' of the self and the 'fracture' of the ego. The search for conditions of realization, the guiding impetus of Deleuze's recasting of the transcendental, appears in this light as a properly ethico-aesthetic experiment, rather than a strictly ontological investigation (or, conversely, it suggests that ontology must take the guise of such an experiment). From the liminal vantage point provided by the empty form of time, the transcendental field is not an object of modelling or of abstract theoretical delineation, but the *ethos* or environment of a properly philosophical *aisthesis*, requiring that thought be traversed and transformed by the trajectories of production 'themselves'. Though we have obviously approached Deleuze from what remains a rather classical concern with the ontology of individuation – albeit one preoccupied with delineating the parameters of a non-representational approach to the question of determination – it is not at all obvious that the *experience* of the nature of difference, or of nature as difference, as 'revealed' by the third synthesis of time, can be contained within a traditional speculative

and scientific interest in ontogenesis. This is especially evident when it comes to the spatiotemporal dynamisms themselves, for, as Deleuze writes: 'a pure spatiotemporal dynamism, with its necessary participation in the forced movement, can be experienced only at the border of the liveable, under conditions beyond which it would entail the death of any well-constituted subject endowed with independence and activity'.<sup>110</sup>

# Conclusion: Becoming Individual

We cannot deny that the Deleuze presented here as a philosopher of ontogenesis – of the individuation of beings and of their objective illusion of their representational capture – is a somewhat tamed figure. Whilst the almost exclusively theoretical approach we have opted for, both in the delineation of our theme and in the ‘archaeological’ connections it has allowed us to make between the various philosophers under scrutiny, has not prevented us from broaching the question of the effect of the anomalies of individuation upon the image of philosophy (from Kant to Simondon), we have not expressly considered what we have elsewhere referred to as ‘the experience of construction’: the consequences, at once ethical and methodological, of the primacy of a preindividual and non-representational field of production, such as affirmed by the authors considered in Part II.<sup>1</sup> I would now like to conclude by briefly considering the link between the ontology of anomalous individuation and this thorny question of the ‘experience’ of philosophy; to ask, as it were, who acts in the theatre of production? Or: what is the ‘place’ of thinking in the ‘universal ungrounding’ [*effondement*] heralded by Deleuze?<sup>2</sup>

We have already noted – with respect to the third synthesis of time and the composition of haecceities – that Deleuze’s doctrine is profoundly concerned not just with the determination of the conditions of realization of individuality, but with the *experience* of the preindividual itself (transcendental empiricism). Now, much of Deleuze’s writing on ontology might give the impression of a convertibility between actuality and individuality, with both considered as terminal products of the divergent trajectories of ontogenesis. It is thus striking to find, in *Difference and Repetition*, a definition of the *individual* that seems to set the ideal for the philosopher’s *ethos*. Opposed to the Ego and the Self,

which function as principles of individuation that expropriate individual or internal differences, the individual is portrayed as the site of a disjunctive synthesis of differences, an intensive system in which heterogeneity communicates with heterogeneity without the mediation of form. The inquiry into the ontology of anomalous individuation thus produces its precise counterpart – its ‘structuralist hero’, as Deleuze once called it – in the Dionysian figure capable of undergoing the experience of that mode of becoming that is proper to intensive multiplicities.<sup>3</sup> Complementing and supporting the new status of determination proposed by Deleuze’s philosophy of difference, we find the agonistic transformation of the thinker in the encounter with the domain of the preindividual and its savage ontology – when the (passive) self of the (larval) philosopher finally equals ‘the unequal in itself’.<sup>4</sup> As Deleuze writes:

Individuation is mobile, strangely supple, fortuitous and endowed with fringes and margins; all because the intensities which contribute to it communicate with each other, envelop other intensities and are in turn enveloped. The individual is far from indivisible, never ceasing to divide and change in its nature. It is not a Self with regard to what it expresses, for it expresses Ideas in the form of internal multiplicities, made up of differential relations and distinctive points or preindividual singularities. Nor is it an I with regard to its expressive character, for here again it forms a multiplicity of actualization, as though it were a condensation of distinctive points or an open collection of intensities.<sup>5</sup>

The key to the problem of individuation is thus situated – both ontologically (the spatiotemporal dynamisms, the speeds and affects that mark haecceities) and ‘ethically’ (in an ethics indiscernible from an epistemology) – in the dramatization of difference, rather than in the extremes of ideal implication or actual explication. Thus, what Deleuze calls ‘the universal concrete individuality of the thinker or the system of the dissolved self’ appears as the conceptual persona proper to the ontology of anomalous individuation, the bearer of a speculative *praxis* that relates to internal difference by interiorizing it, by making ‘itself’ into nothing but the interior (the fold) of intensive processes of differentiation.<sup>6</sup>

Thus, it is to the extent that the thinker makes him or herself into a theatre of individuation, a ‘universal individual’, that the intensive movements beneath the representations of difference come alive.<sup>7</sup> In order to extract the real anomaly of individuation, the differential and preindividual field of production, from its concealment in extensity,

philosophy must become, not a theatre of representation, but a theatre of multiplicities.<sup>8</sup> This theatre is no longer defined by the recognizable individuality of its characters, but rather by the movements of becoming that populate it. It is the province of thinkers, such as the ones we have encountered in the previous chapters, who wish to 'put metaphysics in motion, in action', who 'want to make it act, and make it carry out immediate acts'.<sup>9</sup> In this respect, whilst thought does come second (this is after all the materialist postulate), it does not do so by *reflecting* the intelligible articulations of being. Rather, it relays or *repeats* the movements in being within the figures of thought. *Esse sequitur operari*, as Stanislas Breton pithily summarized Deleuze's project.<sup>10</sup> Or, in Deleuze's own words: 'it is necessary that the movement that denatures things be grounded in things themselves'.<sup>11</sup> This constructivist theme is present in Deleuze's work from the outset, and it provides the intimate link between the ontology of anomalous individuation and the Dionysian 'thought without an image' announced therein. Rather than providing a ground, philosophy, as a theatre of production, constitutes a 'second origin', the constructive repetition of ontogenesis.<sup>12</sup> This is the sense of the following lines from one of Deleuze's earliest writings, his enigmatic meditation on desert islands: 'the movement of the imagination of the islands repeats the movement of their production, but it does not have the same object. It is the same movement, but not the same motor.'<sup>13</sup>

Inasmuch as the fractured and dissolved thinker is traversed by these movements, he or she (or better: *it*) 'becomes individual'; that is, succeeds in making individuality the equal of heterogeneity, anomaly, excess. It is only in this figure of thought as the repetition of production that individuality can be portrayed as 'irreducibly unequal', only here that the following definition, by Werner Hamacher, is in tune with our ontological investigation: 'The term "individuality" properly applies only to that which transgresses the series of forms and the form of the forms itself – knowledge according to types – and undertakes this transgression in the direction of a future that withdraws from typology, objectification, representation.'<sup>14</sup> Having begun with the Aristotelian impassés of the science of the individual, and isolated a key paradigm in the anomaly of the organic within the Kantian philosophy of representation, we finally touch on the idea of an individuation *of philosophy*, of a repetition of production that, at one and the same time, constitutes an experience of construction. It is here that we can discern – beneath the individual that functions as the object of representation – the individual as anomaly.



# Notes

## Acronyms

- AI Whitehead, A.N. *Adventures of Ideas* (New York: Free Press, 1961 [1933]).
- AO Deleuze, G. and Guattari, F. *Anti-Oedipe* (Paris: Minuit, 1973) [*Anti-Oedipus* (London: Athlone, 1984)].
- CJ Kant, I. *Critique of Judgment*, trans. W. Pluhar (New York: Hackett, 1987).
- CN Whitehead, A.N. *Concept of Nature* (Cambridge: Cambridge University Press, 1971 [1920]).
- CPR Kant, I. *Critique of Pure Reason*, ed. P. Guyer and A.W. Wood (Cambridge: Cambridge University Press, 2000).
- DR Deleuze, G. *Différence et répétition* (Paris: PUF, 1968) [*Difference and Repetition* (London: Athlone, 1994)].
- EP I Peirce, C.S. *The Essential Peirce: Selected Philosophical Writings*, vol. 1 (1867–1893), ed. N. Houser and Ch. Kloesel (Bloomington: University of Indiana Press, 1992).
- EP II Peirce, C.S. *The Essential Peirce: Selected Philosophical Writings*, vol. 2 (1893–1913), ed. Peirce Edition Project (Bloomington: University of Indiana Press, 1998).
- ID Deleuze, G. *L'île déserte et autres textes*, ed. D. Lapoujade (Paris: Minuit, 2002).
- IG Simondon, G. *L'individu et sa genèse physico-biologique* (Grenoble: J. Millon, 1995 [1964]).
- IPC Simondon, G. *L'individuation psychique et collective* (Paris: Aubier, 1989).
- LP Deleuze, G. *Le Pli: Leibniz et le baroque* (Paris: Minuit, 1988).
- LS Deleuze, G. *Logique du sens* (Paris: Minuit, 1969).
- MEOT Simondon, G. *Du mode d'existence des objets techniques* (Paris: Aubier, 1989 [1958]).
- MFNS Kant, I. *Metaphysical Foundations of Natural Science*, in *Philosophy of Material Nature* (New York: Hackett, 1985).
- MP Deleuze, G. and Guattari, F. *Mille plateaux* (Paris: Minuit, 1980) [*A Thousand Plateaus* (London: Athlone, 1988)].
- MT Whitehead, A.N. *Modes of Thought* (New York: Free Press, 1966 [1938]).

- OP Kant, I. *Opus Postumum*, ed. E. Förster (Cambridge: Cambridge University Press, 1993).
- PR Whitehead, A.N. *Process and Reality*, ed. D.R. Griffin and D.W. Sherburne (New York: Free Press, 1978 [1929]).
- SMW Whitehead, A.N. *Science and the Modern World* (London: Penguin, 1938 [1926]).
- SUNY State University of New York Press.
- UP University Press.
- WP Nietzsche, F. *The Will to Power* (New York: Vintage, 1968).

## Introduction

1. G. Deleuze, *Différence et répétition* (Paris: PUF, 1968), 203–21 [*Difference and Repetition* (London: Athlone, 1994), 157–70]. Hereafter DR.
2. B. Pinchard, 'Le principe d'individuation dans la tradition aristotélicienne', in *Le problème de l'individuation*, ed. P.-N. Mayaud (Paris: Vrin, 1991), 27. Unless otherwise noted, all translations are my own.
3. P.V. Spade (ed.), *Five Texts on the Mediaeval Problem of Universals: Porphyry, Boethius, Abelard, Duns Scotus, Ockham* (Indianapolis, IN: Hackett, 1994), 5–6.
4. Pinchard, 'Le principe d'individuation', 37.
5. *Ibid.*, 36.
6. *Ibid.*
7. For a compressed but very stimulating account of the anti-Aristotelian abstract ontology heralded by Scotus, and the way it made possible the epistemological revolution that substituted *objects* and their *space* for *things* and their *places*, see chapter IV of E. Alliez, *Les temps capitaux, 2/1: L'état des choses* (Paris: Cerf, 2000), 'D'une chose qui n'existe pas', 49–70.
8. Letter to Arnauld, 30 April 1687. This is itself based on the Scholastic expression: *ens et unum convertuntur*. See M. Mugnai, *Introduzione alla filosofia di Leibniz* (Torino: Einaudi, 2001), 93–6.
9. As Scotus writes, 'the singular is *per se* intelligible as far as it itself goes', *Ordinatio* II. d.3, part 1, q. 6, 192, in Spade, *Five Texts*, 108. Thus, though 'Duns Scotus is the first to pose a positive individuation, inherent to the essence of being [*l'étant*], by the ultimate reality of the thing itself', there is 'a radical tension between the intelligibility of the singular in itself and the indirect knowledge [*intelligence*] that we have of it'. It is only with Ockham that the singular, intelligible itself, is made present to our intelligence. See O. Boulnois's review of P. Alféri's *Le singulier*, 'Le singulier et les limites de la phénoménologie', *Critique* 45: 509 (1990) 736–7. Also his 'Genèse de la théorie scotiste de l'individuation', in *Le problème de l'individuation*, 70–1.
10. *Ordinatio* II. d.3, part 1, q. 5 (Spade, 93), where Scotus, having noted Aristotle's own ambivalence regarding this issue, responds negatively to the question: 'Is a material substance a "this" and an individual through matter?'
11. W.A. Frank and A.B. Wolter, *Duns Scotus, Metaphysician* (West Lafayette, IN: Purdue UP, 1995), 196–7.

12. For a learned and insightful treatment of Deleuze's relation to Scotus and the history of ontology, see Miguel de Beistegui, *Truth and Genesis: Philosophy as Differential Ontology* (Bloomington: Indiana UP, 2004), 221–47.
13. Boulnois, *Etre et représentation* (Paris: PUF, 1999), 364.
14. *Ibid.*
15. M. Heidegger, 'Kant's Thesis About Being', in *Pathmarks*, ed. W. McNeill (Cambridge: Cambridge UP, 1998), 358–9. Of course, it is the solidarity between the notion of individuation as objectivity and the hylemorphic matrix of Kant's thought that sustains the key claim that 'We could not even think of living matter as possible.' I. Kant, *Critique of Judgment*, trans. W. Pluhar (New York: Hackett, 1987), Ak. 394. Hereafter CJ.
16. *Ibid.*, 351.
17. *Ibid.*, 341.
18. *Ibid.*, 362.
19. On the use of Simondon's ontology for an intraphenomenological critique of Heidegger, see J. Garelli, *Rythmes et mondes. Au revers de l'identité et de l'altérité* (Grenoble: J. Millon, 1991), 268ff. The distance between the problematic of ontological difference and Simondon's project has been recently noted in B. Aspe, 'Être singulier commun', in *Simondon*, ed. P. Chabot (Paris: Vrin, 2002), 13–29.
20. G. Deleuze, 'Faille et feux locaux', in *L'île déserte et autres textes*, ed. D. Lapoujade (Paris: Minuit, 2002), 222. Hereafter ID.
21. G. Simondon, *L'individu et sa genèse physico-biologique* (Grenoble: J. Millon, 1995 [1964]), 25. Hereafter IG.

## 1 The Paradoxical Object

1. See C. Bouriau, *Lectures de Kant* (Paris: PUF, 2000), 48–78, on the neo-Kantian readings. On the interests of reason and the faculties, see G. Deleuze, *Kant's Critical Philosophy* (London: Athlone, 1984), 1–10, as well as the essay on the idea of genesis in Kant's aesthetics included in ID.
2. As Kant makes abundantly clear (see CJ 174) this commerce is not itself a domain. It is deprived of legislative power but remains essential to the very cohesion of the faculties.
3. '[S]uprasensible Nature and sensible nature are separated by an abyss.' Deleuze, *Kant's Critical Philosophy*, 39.
4. A.J. Roqué, 'Self-Organization: Kant's Concept of Teleology and Modern Chemistry', *Review of Metaphysics* 39 (1985), 116 (my italics).
5. A very good defence of the view whereby the concept of natural purposes is exhausted by its intrasystemic function is provided in N. Rescher, *Kant and the Reach of Reason* (Cambridge: Cambridge UP, 2000), 101–11.
6. J.H. Zammito, *The Genesis of Kant's Critique of Judgment* (Chicago: University of Chicago Press, 1992), 224.
7. C. Debru, 'L'introduction du concept d'organisme dans la philosophie kantienne: 1790–1803', *Archives de philosophie* 43 (1980).
8. P. Kerszberg, *Critique and Totality* (Albany: SUNY, 1997), 186.
9. *Ibid.*, 189. As I hope to show throughout this book, this reversal of the reversal, catalysed by the anomaly of the organic, is by no means a return to an objectivist dogmatism, but instead signals the opening-out of the space

for a transcendental philosophy of production. This is a notion of production which, unlike in Kant, is not opposed to that of connection, nor is it relegated to the status of a problematic theological concept. On the distinction between connection and production see *ibid.*, 207 and 221.

10. Ernst Cassirer gave a masterful account of the revolutionary effects of Kant's formulation of the problem of self-organization and its effects on nineteenth-century biology, above all in the work of Cuvier, in his *Problem of Knowledge* (New Haven, CT: Yale UP, 1950), 118–212. Whilst demonstrating his customary acumen and erudition, Cassirer overemphasizes the value of the regulative approach for biophilosophy and seems to miss the gravity of postulating within critique 'a special kind of *being*' (121), given that the causal structure of such a being, if accorded actuality, presents a veritable paradox to the scientific cognition of objects as conceived of by Kant. If 'the new critical transcendental concept of objectivity must be extended', as Cassirer writes (119), it appears it must be at a slightly higher cost than anticipated by the great neo-Kantian: 'organicism' alone – as we will argue in Chapter 5, Section 5.3 – does not suffice.
11. K. Ameriks, *Kant and the Fate of Autonomy* (Cambridge: Cambridge UP, 2000), 4 and 21.
12. For a fine account of Herder's role in the genesis of the *Critique of Judgment*, see F. Beiser, *The Fate of Reason* (Cambridge, MA: Harvard UP, 1987), 127–64. See also Zammito, *The Genesis of Kant's Critique*, 197, where he defines iatromechanics as 'the approach which sought to explain all biological phenomena in terms of the inert-matter, impact-theory-of-force approach of mechanical cause'.
13. CJ, 219. In Rescher's gloss: 'We are thus regulatively enjoined to look on nature as a self-systematizing agency purposively endeavouring to produce a *modus operandi* accessible to the human mind.' *Kant and the Reach of Reason*, 103.
14. CJ, 394.
15. CJ, 390.
16. I. Kant, *Metaphysical Foundations of Natural Science*, in *Philosophy of Material Nature* (New York: Hackett, 1985), Ak. 467 (italics mine). Hereafter MFNS.
17. MFNS, 467. These two senses, whilst central to Kant's approach to the problems of natural organization and material individuation, do not by any means exhaust the meaning of 'nature' in his work. G. Buchdal, in *Kant and the Dynamics of Reason* (Oxford: Blackwell, 1992), proposes the following tripartite distinction: '(1) nature in general (which forms the subjects of the Transcendental Analytic of the *Critique of Pure Reason*); (2) nature as a system (discussed both in the Appendix to the Transcendental Dialectic – entitled: "The Regulative Employment of the Ideas of Pure Reason" – and in the two introductions to the *Critique of Judgment*); finally, (3) what in the *Metaphysical Foundations* is called "Special Material Nature", and which treats (by way of example) of the basic concepts and principles of Newtonian Mechanics.'
18. Though there is a 'lag' between nature and matter to the extent that 'matter cannot be given at all a priori'. MFNS, 481.
19. MFNS, 481. As opposed to the form of space, which would be the transcendental part.

20. 'The possibility of a natural science proper rests entirely upon the law of inertia [i.e. of all causality as external ] (along with the law of the permanence of substance). The opposite of this, *and therefore the death of all natural philosophy*, would be hylozoism.' MFNS 544 (italics mine).
21. See CJ, 389.
22. CJ, 375.
23. MFNS, 544.
24. Zammito, *The Genesis of Kant's Critique*, 218.
25. I. Kant, *Critique of Pure Reason*, ed. and trans. P. Guyer and A.W. Wood (Cambridge: Cambridge UP, 2000), Ak. B235. Hereafter CPR.
26. CPR, B236.
27. CPR, B240.
28. CPR, B236.
29. CPR, B236 (italics mine).
30. CPR, B239.
31. CPR, B238. Also CPR, B240.
32. CPR, B241. Having already equated experience with 'empirical *knowledge* of appearances' (in CPR, B234, italics mine), Kant can make rule-bound causal succession into the necessary condition for the appearance of objects and for truth as founded upon the passage from subjectivity to objectivity.
33. CPR, B242.
34. 'For if coming to be out of nothing is regarded as effect of a foreign cause, it has to be entitled creation, and that cannot be admitted as an event among appearances, since its mere possibility would destroy the unity of experience.' CPR, B251.
35. B. Longuenesse, *Kant and the Capacity to Judge* (Princeton, NJ: Princeton UP, 1998), 325.
36. '[W]e keep to what we can observe or experience in such a way that we could produce it as nature does, at least in terms of similar laws; *for we have complete insight only into what we ourselves make and accomplish according to concepts*. But organization as an intrinsic purpose of nature, infinitely surpasses all our ability to exhibit anything similar through art.' CJ 384 (italics mine). Though, as Rescher notes, there is another sense in which the anomaly of 'living matter is an example of breakdown in the repetition of the same' (201).
37. CPR, B246.
38. Deleuze, *Kant's Critical Philosophy*, vii–viii.
39. CPR, B244.
40. MFNS, 453.
41. MFNS, 543.
42. CJ, 371.
43. The issue of the continuity between the Critical philosophy and the account of matter and objectivity provided by Newtonian mechanics is, of course, a fraught one. Buchdal, in polemic with Heidegger, remarks that 'we should have a less crabbed and rigid approach to the different fields covered by Kantian philosophy; above all that we should not think of it as a more or less deductive enterprise, leading from transcendental principles straightaway to a Newtonian physics of nature' (224). Of course, to say with Heidegger that Kant's nature is 'Newton's nature', does omit on the *constructive* and *regulative* approaches presented in the MFNS and CJ,

respectively. Whilst I hope to have shown the extent to which the problem of organized beings both broadens and troubles the critical project, and appreciate Buchdal's notes of caution, it is nevertheless the case that a certain 'Newtonian' understanding of causation and the nature of matter overdetermines Kant's account of objectivity and representation, and that it is because of the primacy of mechanics for the Critical philosophy that the introduction of organized beings is such an ambivalent event within critique, enlisted for the sake of the *desideratum* of systematicity as well as hinting at the possibility of a crisis. For a qualified defence of Heidegger's reduction of Kantian nature to 'Newton's nature' in terms of the ontology of individuation, see Garelli, 'Transduction et information', 249ff.

44. CJ, 383.
45. A. Badiou, 'L'ontologie soustractive de Kant', in *Court traité d'ontologie transitoire* (Paris: Seuil, 1998), 159. This double articulation of transcendental apperception and object =  $x$  as transcendental principles of representational individuation is what Deleuze will refer to as *common sense*, in its coupling with *good sense*, which provides the teleological principles of empirical individuation in the form of the subjects and objects of experience. See DR, 175 [133–4].
46. MFNS, 481.
47. V. Mathieu, *La filosofia trascendentale e l' Opus Postumum di Kant* (Torino: Filosofia, 1958), 349.
48. Quoted *ibid.*, 349.
49. In this sense Mathieu will speak of it as an 'indirect fact'. There is a certain affinity between this and Deleuze's transcendental empiricism in terms of a 'foundation' of real experience (an *a posteriori* foundation).
50. Roqué, 'Self-Organization', 112.
51. CJ, 375.
52. CJ, 376.
53. G. Bennington, 'The End is Here', *Tekhnema: Journal of Philosophy and Technology* 6 (Fall 2000) 45. On the way in which the difficulty in articulating the experience of organisms and their possibility as objects explains Kant's oscillation between the inexplicability of organisms and the duty to think 'mechanically', see P. Guyer, 'Organisms and the Unity of Science', in *Kant and the Sciences*, ed. E. Watkins (Oxford: Oxford UP, 2001), 275–6.
54. Debru, 'L'introduction du concept d'organisme', 491.
55. CJ, 396.
56. G. Canguilhem, 'Le tout et la partie dans la pensée biologique', in *Études d'histoire et de philosophie des sciences concernant les vivants et la vie* (Paris: Vrin, 1994), 320.
57. Mathieu, *La filosofia trascendentale*, 136.
58. CJ, 373.
59. Unity of the organic (as opposed to merely formal) type cannot, according to Kant, be ascribed to matter, which is why the whole must be termed an 'idea': '[T]he possibility of such a product [i.e. natural purposes] is to be based on an idea. But an idea is an absolute unity of presentation, whereas matter is a plurality of things that cannot itself supply a determinate unity for its combination.' CJ, 377.
60. See CJ, 375.

61. CJ, 373.
62. S. Malik, 'Machines and Fabrication: Organization and the Motive-Formative Difference', *Tekhnema* 6 (Fall 2000) 131.
63. CJ, 373.
64. This use of the term eidetic, aptly capturing the determination of the organism as idea, is borrowed from Suhail Malik. I second his assessment of the evacuation of the *ontology* of individuation from Kant's treatment of natural purposes, when Malik writes, for example, that in Kant: 'Material organizations have no unity of themselves; the unity of self-organization is not present(able) to it in its materiality' (134).
65. 'Despite his Leibnizian influences, then, Kant's belief that causality operates by means of *external* forces inclines him towards theism. ... Since in the case of self-organization the effect encompasses much of Nature, the cause must be supranatural: God.' Roqué, 'Self-Organization', 126.
66. Kant himself alludes to the possibility of going beyond the severe dichotomy of ideal and efficient causality when he remarks that our 'concept of causality is greatly restricted if reason has to specify it a priori', CJ, 389.
67. CJ, 374.
68. CJ, 374.
69. Debru, 'L'introduction du concept d'organisme', 511.
70. CJ, 375.
71. CJ, 367.
72. 'A concept such as that of the organism [is] posed as an Idea in a manner that is simply *problematic* and [there remains] the question of knowing *if a matter organizing itself is something or nothing (ein Ding oder ein Unding)* [and furthermore] if there can be *a system of matter according to the principle of final causes.*' Quoted in Debru, 'L'introduction du concept d'organisme', 505, the Akademie reference is 21: 213 (italics mine). See also CJ 397 on 'problematic judgments'.
73. 'The field of the possible and the field of mechanism overlap', A. Philonenko, 'L'antinomie du jugement téléologique chez Kant', *Revue de métaphysique et de morale* 82 (1977) 18.
74. CJ, 389.
75. Philonenko, 'L'antinomie du jugement téléologique', 23.
76. *Ibid.*, 24.
77. In Philonenko's terms this would entail the opposition of a reason and an opinion. As was argued above, this approach is already ruled out once we recognize that, granted the *a priori* character of mechanism, both maxims stand on the territory of reflective judgment.
78. CJ, 387.
79. CJ, 389.
80. Philonenko, 'L'antinomie du jugement téléologique', 27.
81. *Ibid.*, 29.
82. 'An "empirical law" then, is something like a "wooden iron"' and 'an empirical system would be a contradiction.' Mathieu, *La filosofia trascendentale*, 146.
83. Philonenko, 'L'antinomie du jugement téléologique', 36.
84. *Ibid.*, 35. As we shall see in Chapters 5 and 6, it is precisely by positing disparateness as the key trait of the preindividual that both Simondon and

Deleuze forestall the more or less surreptitious imposition of disparate *principles* of individuation.

85. We should note that Kant shows himself to be poorly acquainted with Spinozism and its treatment of individuation. The *Ethics* does deny teleology (contrary to CJ, 393), and while it does not fail to account for the existence of individuals, it does so by considering them as emergent properties of basic elements which form aggregates according to variations in velocity. On the first point, see the appendix to Part I, for example the following unequivocal statement: 'this doctrine concerning the end turns Nature completely upside down'. On the second point, Part II – Axioms 1', 2', 1''–3'', and related Lemmas, as well as the Postulates. For a treatment of Spinoza's doctrine of the organism, see H. Jonas, 'Spinoza's Theory of the Organism', in *Philosophical Essays* (Chicago: University of Chicago Press, 1974), 206–23. The literature on Spinoza and individuation, from Hallett's *Aeternitas* to Brandom's *Tales of the Mighty Dead*, while not as vast as its Leibnizian counterpart, is in many respects just as rich and rewarding.
86. CJ, 391.
87. See CJ, 391.
88. CJ, 393 (italics mine).
89. '[W]e cannot even *think* of living matter as possible,' CJ, 394.
90. CJ, 395.
91. This point is discussed in Bennington, 'The End is Here', 41–2; Guyer, 'Organisms and the Unity of Science', 269–70; H.E. Allison's 'Kant's Critique of Spinoza', in *The Philosophy of Baruch Spinoza*, ed. R. Kennington (Washington, DC: Catholic University of America, 1980), 201–3.
92. Bennington, 'The End is Here', 42. We should also note, to anticipate our discussion of Nietzsche in Chapter 3, that this contingency, understood *qua* exception from the sway of mechanism, threatens to exceed the limited problem of organized beings and affect our knowledge of nature in general. As Guyer notes (270), contingency has 'nothing special to do with *organisms*: It is a general argument that can be made about all particulars in nature, organic or inorganic, because any general concept leaves some thing undetermined about any particular object that falls under it.' Of course, it is only the specific case of natural *purposes* that allows Kant to turn contingency to the advantage of a move towards theism, without which our finitude would easily result in sceptical or nihilistic consequences. Only they serve as the 'sign' that lets us 'postulate an intelligent author of nature whose concepts make necessary what appears merely contingent to us', thus allowing us to 'explain the possibility of our comprehension of particular things in nature'. Guyer, 'Organisms and the Unity of Science', 269.
93. CJ, 396.
94. CJ, 277.
95. Guyer, 'Organisms and the Unity of Science', 265.
96. CJ, 397.

## 2 The Fate of Self-Organization

1. J.A. Cover and J. O'Leary Hawthorne, *Substance and Individuation in Leibniz* (Cambridge: Cambridge UP, 1999), 290.



2. E. Förster, *Kant's Final Synthesis: An Essay on the Opus Postumum* (Cambridge, MA: Harvard, 2000), 20–1.
3. See F. Marty, 'La question de l'individuation chez Kant', in Mayaud (ed.), *Le problème de l'individuation*.
4. CPR, B239.
5. CJ, 217.
6. Mathieu, *La filosofia trascendentale*, 137.
7. CJ, 382–3.
8. For a treatment of this point, see Debru, 'L'introduction du concept d'organisme', 491.
9. Mathieu, *La filosofia trascendentale*, 352.
10. *Ibid.*, 367.
11. *Ibid.*, 362.
12. I. Kant, *Opus Postumum*, ed. and trans. E. Förster (Cambridge: Cambridge UP, 1993), Ak. 21: 388; 21: 402; 21: 407; 21: 184–5. Hereafter OP.
13. M. Mahner and M. Bunge, *Foundations of Biophilosophy* (Berlin: Springer, 1997), 279.
14. OP 22: 506–7.
15. Guyer summarizes this tension as follows: 'In the *Opus Postumum* [Kant] does still seem to be searching for a way to allow for unlimited mechanical exploration of organisms while still showing that they necessarily introduce the thought of an immaterial principle' (276).
16. Förster, *Kant's Final Synthesis*, 70.
17. Rescher, *Kant and the Reach of Reason*, 219.
18. OP 21: 187.
19. This use of the concept of machine suggests that Suhail Malik's discussion of autopoiesis as a *machinic Kantianism* with regard to organization seems to have been anticipated by Kant himself. See Malik, 136–42. Though the two concepts of machine (the Kantian and the autopoietic) are separated by numerous technological, scientific and ideological developments, not least of which the informational formalization of the machine, it is worth noting that Kant does not have any *a priori* objection to linking machines and the organization of the living, especially when this is done for the sake of the unity of science and experience. As Malik himself notes, and as a number of historians of biological thought have pointed out (namely Judith Schlanger and Georges Canguilhem), the organizational concepts of organism and machine are in no way opposed *a priori*; they can both serve a functionalist or technological paradigm of individuation equally well, just as they can fulfil homologous ideological roles, especially with respect to issues of social ontology.
20. OP 21: 186.
21. OP 21: 212.
22. See the entire introduction to Simondon's *L'individu et sa genèse physico-biologique*.
23. OP 21: 226.
24. This persistent ambivalence is registered in the *Opus Postumum* notebooks by way of Kant's statements regarding the inclusion of the fundamentally regulative concept of organic bodies into the *a priori* system of the moving forces of matter.

25. Zammito, *The Genesis of Kant's Critique of Judgment*, 217.
26. Incidentally, it is here that we register the starkest contrast with Deleuze, for whom, despite his seeming debts to Kant, the idea of an organism – as discussed in *Difference and Repetition* – is a determinate multiplicity and not a regulative unity.
27. Guyer, 'Organisms and the Unity of Science', 277.
28. For a defence of this position, see *ibid.*, 259.
29. OP 22: 192. 'The possibility of experience ... presupposes a collective unity of forces from which the distributive unity of experience can be derived.' Förster, *Kant's Final Synthesis*, 88.
30. Guyer, 'Organisms and the Unity of Science', 272–4.
31. OP 21: 586.
32. OP 22: 474.
33. OP 22: 282.
34. OP 22: 486.
35. OP 21: 182.
36. OP 22: 476.
37. OP 22: 355.
38. Förster, *Kant's Final Synthesis*, 45. Kant's theory of vibratory individuation is featured in one of the draft introductions to the 'Transition', where he writes: 'The vibration confers on the parts of matter a certain texture, so that they are combined into a figure in which their own oscillations are able to resist completely the oscillations of the ether. For it is not in all figures that the oscillations of the denser types of matter can resist the lightest. It is as if [the configurations of matter] were to have a tone which is in tune with a certain texture of their parts (the figure of the whole is irrelevant here).' OP 21: 374. This theory of vibrations, which seems to compose bodies from multiplicities without the insertion of ideas or atoms of individuality, bears some interesting similarities to the use of vibrations in both Bergson and Whitehead, as discussed in Deleuze's seminar of 10.03.87. It is also perhaps an interesting precursor, though on a purely speculative level, of some of the recent proposals of string- and membrane-theory in theoretical physics.
39. Förster, *Kant's Final Synthesis*, 42.
40. 'Autonomy means own law. In order to properly understand this concept, it is preferable to compare it to allonomy or external law, which is like the image of autonomy reflected in a mirror. This is, of course, what we would call *control*. These two themes, autonomy and control, are caught in an unceasing dance. The one represents generation, the affirmation of one's identity, internal regulation, the definition of the interior. The other represents consumption, input/output systems, the affirmation of the identity of the other, the definition by the exterior.' F. Varela, *Autonomie et connaissance. Essai sur le vivant* (Paris: Seuil, 1989), 7.
41. Zammito, *The Genesis of Kant's Critique*, 220.
42. N. Luhmann, *Social Systems* (Stanford: Stanford UP, 1995), 261.
43. H. Maturana and F. Varela, *Autopoiesis and Cognition* (Amsterdam: Riedel, 1980), 'Glossary'.
44. For a recognition of the Kantian legacy by one of the founders of the autopoietic school, see A. Weber and F.J. Varela, 'Life after Kant: Natural Purposes and

- the Autopoietic Foundations of Biological Individuality', *Phenomenology and the Cognitive Sciences* 1: 2 (2002), 97–126.
45. Canguilhem, *Études*, 327.
  46. Maturana and Varela, *Autopoiesis*, 86–7.
  47. Varela, *Autonomie et connaissance*, 48, 71 and 75.
  48. Malik, 'Machines and Fabrication', 138, 142.
  49. Varela, *Autonomie et connaissance*, 57, 61.
  50. *Ibid.*, 42.
  51. IG, 25–6.
  52. A.N. Whitehead, *Process and Reality*, ed. D.R. Griffin and D.W. Sherburne (New York: Free Press, 1978 [1929]), 88. Hereafter PR.
  53. A.N. Whitehead, *Science and the Modern World* (London: Penguin, 1938 [1926]), 64–6. Hereafter SMW.
  54. A.N. Whitehead, *Modes of Thought* (New York: Free Press, 1966 [1938]), 146. Hereafter MT.
  55. SMW, 68.
  56. I borrow this expression from Alain Badiou's forthcoming *Logiques des mondes* (Paris: Seuil, forthcoming).
  57. A.N. Whitehead, *Concept of Nature* (Cambridge: Cambridge UP, 1971 [1920]), 143–4. Hereafter CN. Since '[e]vents are fluxes', as Deleuze notes, 'permanence must embody itself in the flux, it must be grasped in prehension.' G. Deleuze, *Le Pli: Leibniz et le baroque* (Paris: Minuit, 1988), 108. Hereafter LP.
  58. SMW, 112. Though it falls beyond the purview of our investigation into Whitehead's reversal of critique, it is worth noting that Whitehead's explications of both cognition and of teleological organization are founded on a notion of 'eternal' objectivity far closer to the role played by Kantian and, especially, Deleuzean ideas than to any sort of correlate of representation.
  59. SMW, 125. And, anticipating our discussion of Simondon's relational ontology in Chapter 5: 'Nature is a theatre for the interrelations of activities. All things change, the activities and their interrelations. ... In the place of the Aristotelian procession forms, [the new physics] has substituted the notion of the forms of process.' MT, 140.
  60. Cover and O'Leary-Hawthorne, *Substance and Individuation*, 260.
  61. Leibniz, *New Essays*, quoted *ibid.*, 261.
  62. Thus Whitehead writes: 'just as the relations modify the natures of the relata, so the relata modify the nature of the relation. The relationship is not a universal. It is a concrete fact with the same concreteness as the relata.' A.N. Whitehead, *Adventures of Ideas* (New York: Free Press, 1961 [1933]), 157. Hereafter AI.
  63. R. Rorty, 'Matter and Event', in *The Concept of Matter in Modern Philosophy*, ed. E. McMullin (London: Notre Dame, 1963), 246.
  64. SMW, 182. Or: 'the notion of an actual entity as the unchanging subject of change is completely abandoned.' PR, 29.
  65. SMW, 182.
  66. CN, 34, 37. Chapter IV of *Concept of Nature* offers a detailed speculative mathematical theory of just how this procedure takes place, under the heading of 'The Method of Extensive Abstraction'.

67. A. Philonenko, *Le transcendantal et la pensée moderne. Etudes d'histoire de la philosophie* (Paris: PUF, 1989), 90.
68. M. Heidegger, *The Metaphysical Foundations of Logic* (Bloomington: Indiana UP, 1984), 85. The sources of Heidegger's turn to the monadology can be found in Husserl's own use of the concept of monad as a guide towards the elaboration of a genetic phenomenology, undertaken at a time when Heidegger was working as his assistant. See E. Husserl, *Analysis Concerning Passive and Active Synthesis: Lectures on Transcendental Logic* (Dordrecht: Kluwer, 2001), where he writes: 'It is only possible to undertake an absolute consideration of the world, a "metaphysics," and to understand the possibility of a world first through a genetic consideration of individuation' (634). For a stimulating commentary on Husserl's genetic monadology and its possible extension into a fully fledged *generative* phenomenology, see A.J. Steinbock, *Home and Beyond: Generative Phenomenology After Husserl* (Evanston, IL: Northwestern University, 1995). We shall return to the relation between static and genetic individuation in Chapter 6, Section 6.2.
69. SMW, 131. Arguably, this Leibnizian figure of *Dasein* can also be characterized using the selfsame terms chosen by Whitehead to qualify the unit-occurrence of cognition as percipient event: 'Its knowledge of itself arises from its own relevance to the things of which it prehends the aspects.' SMW, 174.
70. Heidegger, *The Metaphysical Foundations of Logic*, 99.
71. *Ibid.*, 90 (note).
72. 'In prehensive unifying there is a *possession of unity in advance* to which drive looks, as prehending and tending toward transition.' Heidegger, *The Metaphysical Foundations of Logic*, 94–5. This link between individuation, finitude and teleology reappears in the 1929–30 lectures on *The Fundamental Concepts of Metaphysics*.
73. Heidegger, *The Metaphysical Foundations of Logic*, 98.
74. *Ibid.*, 90.
75. Juan Luis Nobo has pointed to a difference, within Whitehead's cosmology 'between the universe's individualizing manifestations and its individualized manifestations'. See J.L. Nobo, 'From Creativity to Ontogenetic Matrix: Learning from Whitehead's Account of the Ultimate', *Process Thoughts* 8 (1998), <http://pweb.cc.sophia.ac.jp/~yutaka-t/process/index.htm>.
76. PR, 40–1.
77. PR, 23.
78. *Ibid.*, 113. 'Whitehead, I think, conceives himself as having done cosmologically and completely what Kant did epistemologically and incompletely: namely, developing the implication of the "reformed" subjectivist principle that "the whole universe consists of elements disclosed in the analysis of the experiences of subjects"' (PR, 166). Rorty, 'Matter and Event', 243, n22.
79. LP, 106. The clearest statement of this double character – public and private – of prehensions is to be found in PR, 289. See also the comments in Rorty, 'Matter and Event', 236.
80. PR, 190.
81. G. Deleuze, *Seminar Transcripts*, [www.webdeleuze.com/php/sommaire.html](http://www.webdeleuze.com/php/sommaire.html), 07.04.87.

82. SMW, 125.
83. Deleuze, *Seminar Transcripts*, 07.04.87.
84. PR, 21.
85. MT, 96. On the reversibility of actuality and potentiality, consider the Fourth Category of Explanation, which states that: 'it belongs to the nature of "a" being [i.e. an actual occasion] that it is a potential for every "becoming" ' (PR, 22). On how Whitehead's doctrine, once again showing its Leibnizian inspiration, preserves both 'distinguishable individualities' and the continuity of a 'physical flux', see AI, 186.
86. MT, 88.
87. Deleuze, *Seminar Transcripts*, 10.03.87 and LP, ch. 6: 'What is an Event?'
88. CN, 66.
89. Deleuze, *Seminar Transcripts*, 10.03.87.
90. PR, 21.
91. Deleuze, *Seminar Transcripts*, 10.03.87.
92. In his exact words: 'It is important to discriminate the bodily pattern, which endures, from the bodily event, which is pervaded by the enduring pattern, and from the parts of the bodily event.' SMW, 174.
93. SMW, 182.
94. SMW, 124.
95. SMW, 94.
96. SMW, 129.
97. SMW, 98.
98. MT, 166.
99. '[T]he reasons for things are always to be found in the composite nature of definite actual entities.' PR, 19.
100. PR, 23.
101. As Stengers correctly notes: 'There is no experience of satisfaction, because satisfaction makes the subject of an experience into what is curiously referred to as a super-ject, something that will be an object for others, that will pose problems for others.' 'Whitehead' (29.10.1985), in *Les séminaires de Félix Guattari*, [www.revue-chimeres.org/guattari/semin/semi.html](http://www.revue-chimeres.org/guattari/semin/semi.html), 9.
102. LP, 107.
103. PR, 292–3.
104. I owe this point to I. Stengers, *Penser avec Whitehead: une libre et sauvage création de concepts* (Paris: Seuil, 2002).
105. PR, 21.
106. MT, 96.
107. LP, 108.
108. Rorty, 'Matter and Event', 227.
109. MT, 152.
110. On the theological and mathematical sources for this Platonism see PR, 224 (theory of conceptual feelings) and AI, 157 (modern physics and the reality of mathematical relations).
111. See also Garelli, *Rythmes et mondes*, 219, for a persuasive account of the poverty and illegitimacy of such a reduction of ontology to an outmoded natural philosophy (which he defines as Galilean and Cartesian), and the 'explosion of the objective conception of being (*l'étant*)'.
112. SMW, 114.

113. CN, 78.
114. MT, 136–7.
115. Debru, 'L'introduction du concept d'organisme', 506–7. As Debru writes, 'if perceptive experience exhibits something real, it also seems that inner sense may claim to found a possibility'.
116. Mathieu, *La filosofia trascendentale*, 373–401.
117. Förster, who argues against Mathieu on the derivation of the *Opus Postumum* from the problems left open by the third Critique, offers the best treatment of how the doctrine of self-affection provides the 'subjective side' of the ether proofs. See the chapter entitled 'Ether Proof and *Selbstsetzung*lehre' in *Kant's Final Synthesis*.
118. Mathieu, *La filosofia trascendentale*, 290. The study Mathieu refers to is Kurt Hübner's 'Leib und Erfahrung in Kants Opus Postumum', *Zeitschrift für philosophische Forschung* 7: 2 (1953), 204–19. For an interesting reading of the relationship between that object which is 'a phenomenal body of our own' and the formal condition of transcendental apperception in the first Critique, see Longuenesse, *Kant and the Capacity to Judge*, 391–3.
119. For an original treatment of the expansion of the reflective maxim over and against Kant in Poincaré and Nietzsche (whose notion of regulative fictions was, of course, at the heart of Vaihinger's idiosyncratic Kantianism), see É. Deleuze, 'Deleuze and Nietzsche: On Frivolous Propositions and Related Matters', *Pli: The Warwick Journal of Philosophy* 11 (2001), 62–78.
120. PR, 345. On individuation as an ultimately irrational and divine limitation, see SMW, 207.
121. Hallward's polemical-theological characterization of Deleuze's thought, which I borrow here, is the object of several essays, to be synthesized in *Out of this World: Deleuze and the Philosophy of Creation* (London: Verso, forthcoming). I offer chapter 6, specifically the attempt to outline Deleuze's theory of *determination*, by way of firm but comradely dissent with Hallward's stance.
122. PR, 344.
123. Deleuze, *Seminar Transcripts*, 07.04.87. It is, of course, essential to note in this regard that for Deleuze 'interiority is not constituting but constituted, produced by a *fold of the outside*, a result and not an origin'. F.J. Martinez, 'Échos husserliens dans l'oeuvre de G. Deleuze', in *Gilles Deleuze*, ed. P. Verstraeten and I. Stengers (Paris: Vrin, 1998), 117.
124. See Chapter 1, Section 1.6.
125. Bennington, 'The End is Here', p.43.

### 3 The Method of Nature, the Crisis of Critique

1. See the letters to Paul Deussen (May–April 1868) and Erwin Rohde (3 and 4 May of the same year). F. Nietzsche, *Briefe*, in *Historisch-Kritische Gesamtausgabe*, vol. II (Munich: C.H. Beck, 1938).
2. The texts examined below, save for the brief fragment 'On the Origin of Language', are to be found in the third volume of F. Nietzsche, *Historisch-Kritische Gesamtausgabe*, under the heading *Philosophische Notizen*. I have made use here of the only available English translation, in the appendix to C. Crawford's *The Beginnings of Nietzsche's Theory of*

- Language* (NY: Gruyter, 1988). This text also contains a careful reading of the notes on Kant and teleology (see Crawford, ch. 8), as well as the fragment on language. All bracketed page numbers in this chapter refer to Crawford's translations, which I have only amended in their rendering of the term *Zweckmäßig*, which she has as 'expedient' and which I have changed to 'purposive' for the sake of consistency with current translations of Kant. I have also taken into consideration the translation and critical apparatus in the Italian edition of the *Notizen*, F. Nietzsche, *Appunti Filosofici 1867–1869*, ed. G. Campioni and F. Gerratana (Milano: Adelphi, 1993). With the exception of Crawford's work, it is only recently that scholarly attention has been paid to these notebooks in the Anglophone world. See E.P. Miller's 'Empedoclean Nature: Nietzsche's Critique of Teleology and the Organism through Goethe and Kant' and P. Swift's 'Nietzsche on Teleology and the Concept of the Organic', *International Studies in Philosophy* 31: 3 (1998), 111–22 and 29–41, respectively.
3. See J.-L. Nancy, 'Nietzsche's Thesis on Teleology', in L.A. Rickels (ed.), *Looking after Nietzsche* (Albany: SUNY, 1990), 49: 'The draft of 1868, in effect, does not harbour the first of Nietzsche's mature thinking; we will find nothing in it which might allow us to assess, laterally, some simple difference *vis-à-vis* the later texts. Something else must be at stake.' I hope this chapter will demonstrate that Nancy's judgment is far too hasty, founded as it is on a common dismissal of Nietzsche's post-Kantian sources, as well as on an almost total disregard of the contribution made by the intersection of Schopenhauer's and Lange's theses on individuality to the development of Nietzsche's thought.
  4. A masterful genealogy of this debate can be found in Andrea Orsucci, *Dalla biologia cellulare alle scienze dello spirito. Aspetti del dibattito sull'individualità nell'Ottocento tedesco* (Bologna: Il Mulino, 1992).
  5. These are dealt with admirably by Orsucci, with special reference to Nageli and Von Baer, and by Müller-Lauter, with special reference to Nietzsche's reading of Roux. See also Barbara Stiegler's elegant study *Nietzsche et la biologie* (Paris: PUF, 2001), which usefully synthesizes many of the insights provided by these two scholars.
  6. F. Nietzsche, *Unfashionable Observations* (Stanford, CA: Stanford UP, 1995), 180. An excellent commentary on the Schopenhauer notes, which supports the thesis of a first rupture with his mentor, 'a devastating deconstruction of the master's doctrine', as he puts it, can be found in J.I. Porter's *The Invention of Dionysus* (Stanford, CA: Stanford UP, 2000), 57–73.
  7. A persuasive and well-documented case for Lange's influence is made in G.J. Stack's *Lange and Nietzsche* (Berlin: Gruyter, 1983).
  8. See A. Schopenhauer, *The World as Will and Representation*, vol. I (New York: Dover, 1969), §23, 112–19.
  9. As Kant writes, 'the very possibility of such concepts founded on purposes would only be chimerical, were experience not to teach it [to us]', OP 22: 465.
  10. Schopenhauer, *The World as Will and Representation*, I, §25, 128.
  11. N. Nabais, 'Indivíduo e Individualidade em Nietzsche', in *Metafísica do Trágico: Estudos sobre Nietzsche* (Lisbon: Relógio D'Água, 1997). Also W. Hamacher's superb essay ' "Disintegration of the Will": Nietzsche on Individuality and the Individual', in *Premises* (Stanford, CA: Stanford UP, 1999), 143–80.

12. Schopenhauer, *The World as Will and Representation*, I, §23, 112–13. Translation modified.
13. For instance, in his notes on Schopenhauer, Nietzsche will use the term ‘drive’ (*Trieb*): ‘The dark drive brought about through a representation mechanism reveals itself as world. This drive is not included under the *principium individuationis*.’
14. As we note in Chapter 6, the question of asymmetry is of the greatest importance to Deleuze’s own approach to the philosophy of individuation. As he writes: ‘[I]t is not the elements of symmetry present which matter for artistic or natural causality, but those which are missing and are not in the cause; what matters is the cause having less symmetry than the effect ... The negative expression “lack of symmetry” should not mislead us: it indicates the origin and the positivity of the causal process. It is positivity itself.’ DR, 31–2 [20].
15. F.A. Lange, *History of Materialism*, 2nd edn, vol. III (New York: Arno, 1974), 37.
16. *Ibid.*, 37–8.
17. We will consider just such a concept and its role in Deleuze’s approach to the ontology of anomalous individuation in Chapter 6, Section 6.1.
18. Nietzsche’s later relational ontology of force, culminating in the concept of will to power, can thus be seen to find its source in these early ‘post-Kantian’ speculations. As Müller-Lauter writes: ‘Nietzsche’s broadly developed basic thought is that there is no unity in the sense of constancy. Unity is always unity as an organization of conflicting and cooperating power-quanta. Thus the given “relations first constitute beings” (*Will to power*, §625).’ *Nietzsche: The Contradictions of his Philosophy and his Philosophy of Contradiction* (Chicago: University of Illinois Press, 1999), 146. Though we have chosen to focus specifically on Nietzsche’s direct confrontation with Kant’s theses on the organic and his early critique of representation, much of his mature thought can be approached from the vantage point outlined herein, following the themes of multiplicity, relationality, preindividuality and individuation. Müller-Lauter’s work is an indispensable guide in this task. For my own approach to the *relational* ontology of individuation see Chapters 4 and 5, as well as the discussion of Whitehead’s theory of prehensions in Chapter 2, Section 2.3.
19. This crisis can be precisely pinpointed in §64 of the *Critique of Judgment*, entitled ‘On the Character Peculiar to Things Considered as Natural Purposes’.
20. Many of the later notes would support the thesis that this early encounter with Kant, via Lange and Schopenhauer, constitutes the minimal ontological matrix for Nietzsche’s mature speculations on the will to power; for example, when Nietzsche writes: ‘A multiplicity of forces, connected by a common mode of nutrition, we call “life”.’ F. Nietzsche, *The Will to Power* (New York: Vintage, 1968), §641. Hereafter WP. Or when, introducing his theory of organic incorporation-interpretation as the schema for the becoming of living beings, he writes of ‘the vastness and multiplicity of collaboration and mutual opposition that we encounter in the life of every organism’ (WP §707), with the latter understood as a ‘complex of systems struggling for an increase of the feeling of power’ (WP §703).
21. Whilst I have sought to emphasize the question of multiplicity in Nietzsche’s confrontation with Kant – a position corroborated by Müller-Lauter with



reference to the mature writings – several commentators have questioned the persistence of the category of totality in Nietzsche's thought. Michel Haar's reflections on totality, chaos and Nietzsche's relation to 'stoicism' are perhaps the most pertinent in this regard, especially because of how they try to think Nietzsche's 'natural totality' as a multiplicity without unity. See 'Life and Natural Totality' in *Nietzsche and Metaphysics* (Albany: SUNY, 1996), 113–30. On the basis of my own work on the early notebooks and of Müller-Lauter's research, I object instead to the portrait of Nietzsche as a thinker of *organic* totality, for example in Richard Shusterman's 'Nietzsche and Nehemas on Organic Unity', *Southern Journal of Philosophy*, 26: 3 (1988) 379–92. As Haar points out, and as Nietzsche himself stresses in *The Gay Science* §109, 'life' and 'world' cannot be considered according to the very Kantian notions of organicity criticized in the early notebooks. We might want to go even further than Haar and question the use of the concept of totality altogether. As Nietzsche writes in WP §711: 'there is no totality, the world is not an organism at all, but chaos'. I shall touch on the relationship between this preindividual chaos and organic totality in Part II. Let us note for the moment the intimate link between misrepresentations of Nietzsche as a thinker of the organic and the omission of his insistent concern with the philosophy of multiplicity.

22. For Bergson's relationship to evolutionary theory and Darwinism see V. Jankélévitch, *Henri Bergson* (Paris: PUF, 1954) and K. Ansell Pearson, *Philosophy and the Adventure of the Virtual* (London: Routledge, 2001). Deleuze encapsulates this position with admirable economy when he writes: 'Finality, causality and possibility, are always in relation to a thing that is already made, and always presuppose that the "whole" is given.' 'Bergson, 1859–1941', ID, 42.
23. Nietzsche can thus be seen to extend the realm of the purposive far beyond the organic, and perhaps indefinitely so. For example, the following prescient remark: 'In fact, we are also required to ask after final causes in a forming crystal. In other words: teleological reflection and examination of organisms are not identical' (250).
24. Contrary to Nancy's claim that Nietzsche completely ignores the problematic status given to teleology in Kant, thus producing a dogmatic distortion of the *Critique of Judgment*, Nietzsche quotes Kant on this very question, only to conclude that this problematicity, predicated as it is on the strict dichotomy of purposive (teleological) and unpurposive (mechanical), should be put into question. The quote from Kant – 'It is something different to consider a thing according to its inner form as purposive and to regard the existence of a thing as an end of nature' – is thus dovetailed with the following reflection: 'Therefore there is no conflict between the unpurposive method of maintenance and reproduction of an organism with its own purposiveness' (247). Elsewhere, Nietzsche writes: '[Kant] was right: purposiveness lies only in our idea' (251). Once we realize that purposiveness is nothing but the ability to exist, not a product of a representation of totality acting upon a system, we are no longer obliged to seek a resolution in the supersensible.
25. 'Purposiveness is no absolute, rather a very relative purposiveness: seen from other sides, often unpurposiveness' (250).

26. Overcoming the antithesis between mechanism and teleology (or vitalism) was an abiding concern for Nietzsche. He perhaps only acquired the tools for such a task through his encounter with Wilhelm Roux's embryology and its account of self-regulation in ontogenesis. Once again, we refer the reader to Müller-Lauter's groundbreaking research.
27. Paul Guyer has noted how already in Kant, the intrusion of the organic exception threatens to unravel the mechanistic fabric woven in the first Critique. See Guyer, 'Organisms and the Unity of Science', 263.
28. See H. Bergson, *Oeuvres* (Paris: PUF, 1959), 664, and Deleuze's commentary in *Bergsonism* (New York: Zone Books, 1988), 88. A more exhaustive treatment of this topic would be obliged to deal with the relationship between organic incorporation and agonistic interpretation in Nietzsche's mature thought, and the way that the concept of multiplicity is specified in terms of conflict, becoming and hierarchy, thereby producing an understanding of the invention of organs and the formation of functions which operates as a positive critique of Kantian teleology, providing a far richer and more dynamic ontological landscape than the one presented in the early notebooks. On this subject, see A. Moles, *Nietzsche's Philosophy of Nature and Cosmology* (New York: Lang, 1990), 144–5.
29. 'What things are is something that can only be established by a measuring subject placed alongside them ... Now the question is, how does such a measuring being originate?', F. Nietzsche, *Philosophy and Truth: Selections from Nietzsche's Notebooks of the Early 1870s*, ed. D. Brazeale (Atlantic Highlands, NJ: Humanities, 1979), 37.
30. *Ibid.*, 24–5.

#### 4 Systems of Habit

1. Some of the agonistic, or interactionist, postulates of Nietzsche's later thought of the will to power will be dealt with in the next chapter, in terms of Simondon's concepts of *transduction* and *disparation*.
2. D. Janicaud, 'L'habitude selon Maine de Biran et Ravaisson', *Revue philosophique de la France et de l'étranger* 158 (1968) 67.
3. Quoted in the entry 'Habitude' of A. Lalande's *Vocabulaire critique et technique de la philosophie* (Paris: PUF, 1956), 392–8.
4. Janicaud, 'L'habitude selon Maine de Biran et Ravaisson', 68.
5. Lalande, *Vocabulaire*, 398.
6. Lalande, *Vocabulaire*, 397.
7. G. Deleuze, *Empirisme et subjectivité* (Paris: PUF, 1953), 62.
8. In his *Dialogues* with Claire Parnet (Paris: Flammarion, 1966), Deleuze himself, apparently reversing his early verdict regarding empiricism as a philosophy of principles, defines it, on the basis of its promotion of the AND and of the exteriority of principles, as 'a vital protest against principles' (69).
9. Deleuze, *Empirisme et subjectivité*, 62.
10. *Ibid.*, 64.
11. *Ibid.*, 64.
12. M. Ferraris, *L'immaginazione* (Bologna: Il Mulino, 1996), 88.
13. F. Ravaisson, *De l'habitude* (Paris: Payot & Rivages, 1997), 36.
14. *Ibid.*, 36.

15. F. Ravaisson, *De l'habitude*, 37.
16. *Ibid.*, 37 and 38.
17. *Ibid.*, 52–4.
18. *Ibid.*, 76.
19. *Ibid.*, 78–9.
20. *Ibid.*, 82–3.
21. W. James, *The Principles of Psychology*, vol. I (New York: Dover, 1950).
22. By canalization I understand what the embryologist Waddington termed 'homeorhesis' (as opposed to 'homeostasis'): 'the dynamic equilibrium of "channelled" formations'. See J. Piaget, *Biology and Knowledge* (Chicago: University of Chicago Press, 1971), 12.
23. Deleuze, *Empirisme et subjectivité*, 3.
24. James, *Psychology: Briefer Course* (Cambridge, MA: Harvard UP, 1984), 138.
25. *The Principles of Psychology*, I, 105.
26. On the different emphasis given by Peirce and James to cosmological speculation, see R. Tursi, 'William James' Narrative of Habit', *Style* 33: 1 (1999) 67–87, and S. Haack, 'Pragmatism and Ontology: Peirce and James', *Revue internationale de philosophie* 31 (1977) 377–400.
27. Quoted in M.L. Raposa, 'Habits and Essences', *Transactions of the Charles S. Peirce Society* 20 (1984) 148. See also 'Pragmatism and the Logic of Abduction', in *The Essential Peirce*, vol. II (1893–1913), ed. Peirce Edition Project (Bloomington: Indiana University Press, 1998) [hereafter EP II], 235, for the relationship between hypothesis, habit and the 'avoidance of surprise' that James also regarded as the cornerstone of the naturalized epistemology of pragmatism. As Peirce writes: 'What I propose to do ... is to call in question the perfect accuracy of the fundamental axiom of logic. This axiom is that *real things exist* or in other words, what comes to the same, that every intelligible question whatever is susceptible in its own nature of receiving a definitive and satisfactory answer.' 'Design and Chance' in *The Essential Peirce*, vol. I (1867–1893), ed. N. Houser and C. Kloesel (Bloomington: University of Indiana Press, 1992), 16. Hereafter EP I. For the treatment of the principle of individuation within Peirce's semiotics see P. Thibaud, 'Peirce on Proper Names and Individuation', *Transactions of the Charles S. Peirce Society* 23 (1987) 521–38.
28. Karl Otto Apel has indicated the significance and radicality of Peirce's cosmogonic project, setting it apart from a cosmology: 'a number of the characteristic features of Peirce's cosmology can be understood as [a] sort of quasi-natural scientific explanation of the development of the world ... Peirce's chief intention, however, is evidently far more radical. He aims not to offer an explanation by presupposing laws, but rather to use the original conditions of world history as a basis for offering a historical-genetic explanation of all laws, and, indeed, of lawfulness itself. In short, his aim is not a "cosmology" but a "cosmogony".' See K.O. Apel, *Charles S. Peirce: From Pragmatism to Pragmaticism* (Atlantic Highlands, NJ: Humanities, 1995), 150. For a comprehensive treatment of the *Monist* essays, see also M.G. Murphey, *The Development of Peirce's Philosophy* (Cambridge, MA: Harvard, 1961), especially ch. 17, entitled 'Cosmology'.
29. For the relationship between Peirce's theory of categories and his ontology of habit see J.K. Feibleman, *An Introduction to the Philosophy of Charles S. Peirce*

(Cambridge, MA: MIT Press, 1970), 183–95. In Peirce, see ‘A Guess at the Riddle’, EP I, 248, where he writes: ‘The First is that whose being is simply in itself, not referring to anything nor lying behind anything. The Second is that which is what it is by force of something to which it is second. The Third is that which is what it is owing to things between which it mediates and which it brings into relation to each other.’ Chance and spontaneity belong to the immediacy of the First and can therefore never be aptly described from outside themselves. Whilst the category of Secondness, or *reaction*, is sometimes used by Peirce to approach the problem of individuation, I think that the relationship between Law and Habit, belonging to Thirdness, or *relation*, is a far more fruitful target for an investigation into Peirce’s contribution to the ontology of anomalous individuation.

30. EP I, 308.
31. ‘The Architecture of Theories’, EP I, 288.
32. EP I, 288–9.
33. As Peirce states in ‘Design and Chance’, EP I, 221: ‘The operation of chance show[s] a definite tendency to bring about unlikely events by varying means under varying circumstances.’
34. For Peirce’s treatment of the three varieties of evolutionary explanation, see his essays ‘The Doctrine of Necessity Examined’, ‘Evolutionary Love’, ‘Design and Chance’ and ‘The Laws of Nature’. For a synoptic commentary, see W.H. Werkmeister, ‘The Universalistic Evolutionism of Charles Sanders Peirce’, *Southern Journal of Philosophy* 9 (1971) 327–33.
35. ‘The Architecture of Theories’, EP I, 289.
36. ‘A Guess at the Riddle’, EP I, 278.
37. The primacy of habit over chance is stated in the following passage from ‘The Doctrine of Necessity Examined’, EP I, 210: ‘I make use of chance chiefly to make room for a principle of generalization, or tendency to produce habits, which I hold produced all regularities.’
38. G. Kampis, ‘Computability, Self-Reference and Self-Amendment’, *Communication and Cognition* 12 (1995) 91–109. Kampis’s concept of component-systems accordingly stretches the unitary character of the very notion of system to the limit, bringing him quite close to the Deleuzo-Guattarian concept of an assemblage. For example, in the definition of a component-system as ‘a system characterized by the inherent ability to produce its own components, [in which] laws come and go, and after a while the structure of the system may be completely different from its initial one, with perhaps not even a single one intact’.
39. I. Kemp-Pritchard, ‘Peirce on Individuation’, *Transactions of the Charles S. Peirce Society* 14 (1978), 96.
40. Going by the testimony of Lachelier in his ‘observation’ to the entry in Lalande’s dictionary, the notion of relation belongs to the philosophical and semantic field of the concept of habit, appearing, for example, in Descartes’ *Regulae*.
41. Quoted in Raposa, ‘Habits and Essences’, 151. See also the following statement: ‘The interest in classes of givers, gifts, and recipients here has been superseded by an interest in the *system* that encompasses the giver, the gift, and the recipient, and in the laws and habits of behaviour that govern this interaction’, 153. By the same token, a ‘person’ is nothing but an

- 'integrated system of habits', Murphey, *The Development of Peirce's Philosophy*, 344.
42. *Ibid.*, 151–2.
  43. This aspect of Peirce's ontology is expressed with admirable clarity and insight by Raposa: 'Peirce extends this systems-type analysis in order to argue that continuous systems are embedded one within another, in much the same way that a line drawn on a blackboard represents both a continuous process and a discontinuity within a continuum (the blackboard) of a higher dimensionality ... [T]he essential habit or nature of an individual may function as a "law of nature" for an individual at a lower dimensionality, while, at the same time, constituting a non-essential disposition or a partial determination of the nature of a more general system' (161–2). In Chapter 5, we shall see with Simondon how a transductive, as opposed to recursive, understanding of the development and interaction of systems affects the relationship between scalar difference and the process of individuation.
  44. See 'New Elements', EP II, 316. Within the remit of the 'extreme realism' regarding generality that he steadfastly defended, Peirce often gives the impression of oscillating between establishing a genesis of law on the basis of a process whose basis is itself not 'legal', and making law itself into a 'active general principle'. See 'The Seven Systems of Metaphysics', EP II, 183.
  45. See Haack, 'Pragmatism and Ontology', 382 and 390.
  46. Murphey, *The Development of Peirce's Philosophy*, 341.
  47. See 'Individual (in logic)', Peirce's entry in Baldwin's *Dictionary of Psychology and Philosophy*.
  48. Quoted in Gordon Locke's formidable article 'Peirce's Metaphysics: Evolution, Synechism, and the Mathematical Conception of the Continuum', *Transactions of the Charles S. Peirce Society* 36: 1 (2000) 135. I am deeply indebted to Locke's paper for my treatment of Peirce's concept of the continuum.
  49. Quoted in Locke, 'Peirce's Metaphysics', 137.
  50. 'The Seven Systems of Metaphysics', EP II, 183.
  51. Apel has noted that Peirce borrows from Aristotelianism the notion of matter as pure potentiality, translating it into his own concept of Firstness. Whilst this is faithful to Peirce's self-presentation, it fails to emphasize sufficiently the hostility of 'habitual' evolution to any view of matter as passive, as well as to any hylemorphism concomitant with this conception. Indeed, if Peirce can be faulted on anything (see Section 4.5 below), it is for espousing the sort of spiritualistic hylozoism that would make matter active by turning it into 'effete mind'. See Apel, *Charles S. Peirce*, 154.
  52. Locke, 'Peirce's Metaphysics', 138.
  53. See Kemp-Pritchard's 'Peirce on Individuation' for a concept of 'divergent instantiation' that goes some way towards abolishing any transcendence of law with respect to individuality.
  54. 'On Science and Natural Classes', EP II, 117.
  55. For example, EP II, 120.
  56. EP II, 125 and 123.
  57. EP II, 127. Italics mine.
  58. Other than the notions of an ideality of genesis and of a primordial spontaneity, an affinity between Ravaisson and this aspect of Peirce can be registered in the latter's use of the concept of *desire*. See EP II, 118.

59. Quoted in Raposa, 'Habits and Essences', 159.
60. On certain varieties of habit as 'apparent violations of the law of energy', see 'Man's Glassy Essence', EP I, 225.
61. EP I, 227.
62. Apel, *Charles S. Peirce*, 151.

## 5 Gilbert Simondon's Relational Ontology

1. See IG, 22. In Simondon's own writings, criticism is directed primarily against the three variants of the principle of individuation: atomism, hylemorphism, Platonism. Notwithstanding this focus on the ancient or 'classical' options concerning individuation, with specific regard to the question of *form* Simondon will provide detailed criticism of certain contemporary currents of thought; namely, Gestalt psychology and cybernetic information theory.
2. 'In order to think individuation, being must be considered not as substance, or matter, or form, but as a tensed, oversaturated system, above the level of unity, not consisting simply in itself, and which cannot be adequately thought according to the principle of the excluded middle; concrete being, or complete being, that is, preindividual being, is a being that is more than a unity.' IG, 23–4.
3. M. Combes, *Simondon. Individu et collectivité* (Paris: PUF, 1999), 11.
4. IG, 25.
5. IG, 30.
6. IG, 203n15. For Simondon's application of his relational ontology of individuation to the question of perception see G. Simondon, *L'individuation psychique et collective* (Paris: Aubier, 1989), in particular ch. 1: 'The Individuation of Perceptual Units and Signification', 73–95. Hereafter IPC.
7. On the distinction between *individuation* and *individualization*, see IPC, 132, where the latter is defined as 'the individuation of an individuated being, resulting from an individuation, [and creating] a new structuration within the individual'. See also the editors' remark in the introduction to S. Oyama, P.E. Griffiths and R.D. Gray, *Cycles of Contingency: Developmental Systems and Evolution* (Cambridge, MA: MIT Press, 2001): 'Taking a systems perspective on developmental processes means, among other things, attending to the ways in which the developing organism functions as a resource for its own further development' (6).
8. IG, 26–7.
9. IG, 30.
10. See Pascal Chabot, *La philosophie de Simondon* (Paris: Vrin, 2003).
11. See Introduction, section headed 'Individuation and the ontological difference'.
12. I have tried to draw the political consequences of this question in two brief essays: 'L'essere interattivo', *Derive Approdi* 21, and 'La disparation', *Multitudes* 18.
13. In this respect, I profoundly object to Hottois's claim that the symbolic is 'the *conditio sine qua non* for understanding Simondon's thought'. See G. Hottois, *Simondon et la philosophie de la 'culture technique'* (Brussels: De Boeck, 1993), 48. In the same vein, see also A. Fagot-Largeault's essay 'L'individuation en

- biologie', in the collective volume *Gilbert Simondon* (Paris: Albin Michel, 1994), 36–40.
14. IG, 24.
  15. On this 'ecumenical' tendency in Simondon's thought, see Hottois, *Simondon et la philosophie*, 116. For an objection to Simondon's ethics, see Deleuze's review of *L'individu et sa genèse physico-biologique* in ID, 124.
  16. DR, 286 [222] and 317 [246].
  17. Critiques which largely resemble Simondon's have in effect been levied against the use of the concept of information, especially in the biological and psychological sciences. See S. Oyama, *The Ontogeny of Information: Developmental Systems and Evolution*, 2nd edn (Durham: Duke, 2000), as well as Mahner and Bunge, *Foundations of Biophilosophy*.
  18. Combes, *Simondon*, 17.
  19. The seminal work in this regard is C.E. Shannon and W. Weaver's *The Mathematical Theory of Communication* (Urbana: University of Illinois Press, 1949).
  20. The term 'first information' appears in a footnote, as an elucidation of the statement 'one could say that information is always in the present, actual, because it is the sense according to which a system individuates itself'. As Simondon remarks: 'This affirmation does not lead to disputing the validity of the quantitative theories of information and of the measures of complexity, but it supposes a fundamental state – that of preindividual being – which is anterior to every duality of sender and receiver, and thus to every transmitted message. What remains of this fundamental state in the classical case of information transmitted as a message, is not the source of information, but the primordial condition without which there is no information-effect, and thus no information: the metastability of the receiver, be it technical or a living individual. Let us call this information "first information".' IG, 29n8.
  21. Garelli, *Rhythmes et mondes*, 325.
  22. R. Ruyer, 'La quasi-information', *Revue philosophique de la France et de l'étranger* 155 (1965) 299.
  23. From Katz and Kahn's *The Social Psychology of Organizations*, quoted in F.E. Emery (ed.), *Systems Thinking* (London: Penguin, 1968), 96. I am grateful to Jon Rubin for directing my attention to this passage.
  24. IG, 29. Several readers of Simondon seem to have been dazzled by his apparent fidelity to the cybernetic revolution and not entirely grasped the radicality of his critique.
  25. G. Simondon, *Du mode d'existence des objets techniques* (Paris: Aubier, 1989 [1958]). Hereafter MEOT. As Simondon notes in *Du mode d'existence des objets techniques* this event cannot be simply equated with chance: 'A technical antinomy that poses a problem for philosophical thought: information is like the event of chance, but is nevertheless distinct from it ... Information is ... halfway between pure chance and absolute regularity' (136–7). Insofar as it is founded on the encounter between structuration and metastability, information (like Peircean habit in this respect) is 'between' chance and law, demanding a *degree* of plasticity, a disposition to receive and modulate. In other words, information is an event that depends on the potentialities of metastable matter and the singularities of germinal form, and not on a possibility abstracted from the trajectories of ontogenesis.

26. It should be noted that Simondon's bracketing of the technical concept of signal does not contradict Deleuze's account of the 'signal-sign system', inasmuch as in the latter the nature of the signal is defined by the sign, conceived as the invention of a communicability between heretofore heterogeneous series or domains.
27. IG, 193n2.
28. IG, 49.
29. IPC, 54
30. MEOT, 143.
31. MEOT, 126.
32. Also known as Dynamical Systems Theory (DST).
33. See Fagot-Largeault, 'L'individuation en biologie', 40.
34. As Hendriks-Jansen notes, it is necessary 'to think of the plans "constructed" through interactive experience not as hierarchies of procedures or concepts but as interactively emergent organizations of activity'. See H. Hendriks-Jansen, *Catching Ourselves in the Act* (Cambridge, MA: MIT Press, 1996), 317.
35. Just like Oyama and Hendriks-Jansen, Simondon regards development and behaviour essentially in terms of a difference of degree: 'Development is a behaviour upon behaviours [*un comportement sur des comportements*], a progressive weaving of behaviours, the adult being is a dynamic fabric, an organization of separations and reunions of structures and functions.' IG, 204.
36. As in Simondon, the critique of transcendent principles of individuation leads interactionists towards an idea of modelling that is essentially *descriptive*, tracking the historical trajectories of development and eschewing any transcendental account of individuation, preferring instead to consider its plural operations. As Combes notes, 'in the perspective of a philosophy of individuation, *one cannot account for the possibility of knowing individuated beings otherwise than by giving a description of their individuation*'. Combes, *Simondon*, 24. In the next chapter we shall see how Deleuze's concern with internal difference leads him beyond this descriptive approach.
37. Hendriks-Jansen, *Catching Ourselves in the Act*, 325–6.
38. 'Form emerges in successive interactions. Far from being imposed on matter by some agent, it is a function of the reactivity of matter at many hierarchical levels, and of those interactions to each other.' Oyama, *The Ontogeny of Information*, 26. This allows us to juxtapose the formal *result* of interaction to the formal *principles* of a philosophy of individuation which functions through a mechanized or materialized intentionality.
39. *Ibid.*, 72.
40. I. Stengers, *Cosmopolitiques*, vol. vi (Paris: Synthélabo, 1998), 131.
41. *Ibid.*, 132. 'Invention' is depicted by Stengers as a relational category, which, contrary to the idea of a 'choice' amongst 'possibilities', depends on an interaction that is itself neither entirely intentional nor entirely mechanistic.
42. As Garelli points out, the individual is an agent only to the extent that it is first and foremost a theatre of operations, the node or relay of an individuation in progress. 'Transduction et information', 58.
43. IG, 202.



44. This is what Simondon himself does, in a concession to cybernetics which flatly contradicts his non-particulate theory of information. See IG, 191.
45. IG, 179n15.
46. IG, 261.
47. It is important to note that when Deleuze attacks analogy, it is as an analogy of entities and not an analogy of operations. See DR, 55–6 [38].
48. On allagmatics see IG, 259–68. See also Muriel Combes's perspicacious analyses of allagmatics in *Simondon. Individu et collectivité*, 28–31.
49. IG, 264.
50. IG, 30.
51. IG, 28n7.
52. In Simondon's philosophy of individuation, time is neither an object nor a horizon for philosophy, it '*comes out of the preindividual like the other dimensions according to which individuation is effectuated*'. IG, 32.
53. See Garelli, 'Transduction et information', 61. Simondon does however link his position to that of *intuition*: 'Transduction is therefore not only a procedure of the mind [*démarche de l'esprit*]; it is also intuition because it is that by which a structure appears in a problematic domain as contributing to the resolution of the problems posed.' IG, 32.
54. Garelli, *Rythmes et mondes*, 187.
55. It is not by chance that Garelli writes of purging Simondon of any trace of physicalist reduction as a prolegomenon to his appropriation for phenomenology, *Rythmes et mondes*, 316.
56. *Ibid.*, 292.
57. This danger is indicated by Hottois, when he writes that 'the preindividuated is never nondescript' [*le pré-individué n'est jamais quelconque*]. *Simondon et la philosophie*, 36.
58. See IPC, 59–61. Deleuze will borrow the concept of modulation from Simondon, defining it as 'the continuous variation of matter' and the modulator as 'a mould which perpetually changes its grid as soon as it attains it. So that there is a continuous variation of matter through its equilibrium states, and modulating is moulding in a continuous and variable manner, but one will also say that moulding is modulating in a constant and finite way, determined in time.' Deleuze, *Seminar Transcripts*, 27.02.79.

## 6 The Drama of Being

1. A. Villani, 'Deleuze et l'anomalie métaphysique', in *Gilles Deleuze. Une vie philosophique*, ed. E. Alliez (Paris: Synthélabo, 1998), 52. Villani goes on to write the following: 'The anomalous is the ground of Deleuzean metaphysics, it is the point of over-taking [*sur-saisie*] in which the lines take hold of one another, and take hold of themselves as lines, forever unequal to themselves, in this simple excess [*débord*] which constitutes their being' (53). In a more technical register, Deleuze and Guattari use 'Anomalous' [*l'Anomal*] to denote the edge of a multiplicity, which functions both to stabilize it, individuating its maximal dimension, and as its point of connection or symbiosis with other multiplicities. The Anomalous is also what leads the multiplicity into becomings on a line of flight constituted by all other Anomalies. Gilles Deleuze and Félix Guattari, *Mille Plateaux* (Paris: Minuit,

- 1980), 305–6 [*A Thousand Plateaus* (London: Athlone, 1988), 249]. Hereafter MP.
2. DR, 274 [212]. The passage from which I take this expression stages a discussion of Bergson's account of differentiation.
  3. I have discussed this question of fanaticism at length, with relation to the post-Kantian philosophies of production of Schelling and Deleuze in my essay 'Fanaticism and Production: On Schelling's Philosophy of Indifference', *Pli: The Warwick Journal of Philosophy* 8 (1999), 46–70.
  4. 'Representation, especially when it becomes infinite, is imbued with a presentiment of groundlessness. Because it has become infinite in order to include difference within itself, however, it represents groundlessness as a completely undifferentiated abyss, a universal lack of difference, an indifferent black nothingness ... We see this with Schelling, with Schopenhauer, and even with the first Dionysus, that of the *Birth of Tragedy*: their groundlessness cannot sustain difference. However, the self in the form of the passive self is only an event which takes place in pre-existing fields of individuation ... Similarly the I in the form of the fractured I allows to pass all the Ideas defined by their singularities, themselves prior to fields of individuation. Just as singularity as differential determination is preindividual, so is individuation as individuating difference an ante-I or ante-self. The world of "one" or "they" is a world of *impersonal individuations* and *preindividual singularities*.' DR, 354–5 [276–7]. See also G. Deleuze, *Logique du sens*, 130–1 (Paris: Minuit, 1969) [*Logic of Sense* (New York: Columbia, 1990), 107] (hereafter LS), where Deleuze writes of Nietzsche's step beyond Schopenhauer as consisting in the discovery of 'something neither individual nor personal, but which is nevertheless singular; not at all an undifferentiated abyss, it leaps from one singularity to another, casting always the dice belonging to the same cast, always fragmented and formed again in each throw ... This new discourse is no longer that of the form, but neither is it that of the formless: it is rather that of the pure informal [*le pur informel*].' Translation modified.
  5. DR, 43 [28].
  6. ID, 44.
  7. A. Badiou, 'Gilles Deleuze, *The Fold: Leibniz and the Baroque*', in *Gilles Deleuze and the Theater of Philosophy*, ed. C.V. Boundas and D. Olkowski (London: Routledge, 1994), 55.
  8. LP, 91.
  9. LP, 86.
  10. Regarding the individual notion and its opposition to the classical logic of attribution, see LP, 55–78, and the seminars on 15.04.80 and 16.12.86.
  11. It is important to note that removed from its embeddedness in monadology, that is, from a logic and a metaphysics of individuation, the idea of an individual notion as the conjunction of infinite comprehension and unitary extension is perfectly compatible with a philosophy of representation and its handling of both generality and merely numerical or *solo numero* difference. This matter is dealt with in *Difference and Repetition*, in the fiendishly forbidding theory of the 'natural blockages of the concept', wherein conceptual difference is hampered by the effects of repetition. Deleuze's aim is to affirm a positivity of repetition that no longer subjects it to a purely representational

conception of identity and difference. It is this approach that allows him to find, in both Leibniz and Kant, immanent 'dynamic factors' that account for the intensive genesis of beings and, secondarily, for representation itself. See DR, 20–41 [11–27]. To avoid a dangerous misunderstanding, we must note that whilst Deleuze speaks of a quest for a 'non-conceptual difference' it is on the basis of an opposition, drawn from Kant, between the identitarian concept and the differential and problematic Idea. It is the latter which is synonymous with the use of the term 'concept' in most of Deleuze's work, from the 1956 essay on Bergson to *What is Philosophy?*

12. Deleuze, *Seminar Transcripts*, 16.12.1986.
13. Deleuze, *Seminar Transcripts*, 16.12.1986. Simondon himself, criticizing both Leibniz and Spinoza for their 'substantialism', notes how they refuse 'to place a genesis of substance in the guise of the constitution of individual complete notions; that is, substantial essences, at the beginning of becoming. Substantial being can hardly become because it is resolved in advance; it is always absolutely monophasic, because it consists in itself ... Substance is *one* because it is *stable*; it is actual, it is not charged with the tension of potentials.' IG, 238.
14. Recall our discussion in Chapter 2, Section 2.3, of Whitehead's variation on this ontological theme.
15. Deleuze, *Seminar Transcripts*, 27.01.1987.
16. ID, 63.
17. 'The source of dualism is precisely the opposition between something that can be affirmed as one, and something that can be affirmed as multiple. ... There are multiplicities, which evidently implies a theory and a practice of multiplicities. When we leave the domain of multiplicities we fall back into dualisms, i.e. into the domain of non-thought, we leave the domain of thought as process.' Deleuze, *Seminar Transcripts*, 26.06.73.
18. Deleuze, *Bergsonism*, 38.
19. MP, 14–15 [8].
20. DR, 327 [254]. We should note that by linking the Kantian and Simondonian problematic of intensity (of intensive quantities and intensive systems, respectively) to the Bergsonian theory of multiplicities, Deleuze provides himself with the means to critique Bergson's reliance on a dichotomy of mechanism and 'qualitativism', which Deleuze thinks occludes the real site of internal difference. See DR, 307–8 [238–9].
21. CPR A524/B552. Though Nietzsche's own acquaintance with the Kantian texts is a matter of debate, it is interesting to note that his reading of Lange and the cellular biologists leads him to invert Kant on this precise point, by positing life as infinite multiplicity.
22. CPR A527/B556.
23. For Deleuze's own remarks on the actual infinite, see his seminar on 16.12.1986.
24. This means removing continuity from both intuition and understanding. As Deleuze notes: 'The continuum [*le continu*] truly belongs to the realm of Ideas only to the extent that an ideal cause of continuity [*la continuité*] is determined. Taken together with its cause, continuity forms the pure element of quantifiability, which must be distinguished both from the fixed forms of intuition (*quantum*) and from variable quantities in the form of concepts of

- the understanding (*quantitas*).’ This ideal cause is located in the pure determinability of the differential relation  $dx/dy$ , and, more generally, characterizes the virtuality of structure. DR, 222 [p.171 – translation modified].
25. This stance, together with the notion of intensity discussed above, suggests the possibility in Deleuze of a non-organic and non-atomic conception of individuality.
  26. E. Husserl, *Logical Investigations*, vol. I, ed. D. Moran (London: Routledge, 2001), §70. On Husserl and Deleuze, see Martinez, ‘Échos husserliens dans l’œuvre de G. Deleuze’, 105–17. While Martinez provides us with refined and stimulating analyses of Deleuze’s relationship to the Husserlian notions of sense, static and dynamic genesis, and passive synthesis, perplexingly he fails to address the question of multiplicity.
  27. For such a perspective, highly influential on Deleuze and intensely engaged with the validity of Husserl’s proposal, see J. Vuillemin, *La philosophie de l’algèbre* (Paris: PUF, 1962), 465–518.
  28. E. Husserl, *Formal and Transcendental Logic*, trans. D. Cairns (The Hague: Martinus Nijhoff, 1969), 95. This entire aspect of Husserl’s thinking is set out with admirable clarity in Suzanne Bachelard’s *A Study of Husserl’s Formal and Transcendental Logic* (Evanston, IL: Northwestern University Press, 1968), 45–58. See also C.O. Hill, ‘Husserl’s *Mannigfaltigkeitslehre*’, in C.O. Hill and G.E. Rosado Haddock (eds), *Husserl or Frege?: Meaning, Objectivity and Mathematics* (Chicago: Open Court, 2000), 161–78.
  29. Husserl, *Formal and Transcendental Logic*, 93. This empty ‘anything-whatever’ prolongs the very genealogy of the object which the likes of Boulnois and Courtine trace from Scholasticism to Kant and Heidegger.
  30. Bachelard, *A Study of Husserl’s ... Logic*, 54.
  31. *Ibid.*, 93.
  32. Bernhard Riemann, ‘On the Hypotheses which Provide the Grounds for Geometry’, *Nature* 8: 183–4 (1973), 14–17, 36, 37.
  33. A. Badiou, ‘Un, multiple, multiplicité(s)’, *Multitudes* 1 (2000), 205.
  34. MP, 305 [249].
  35. ‘À quoi reconnaît-on le structuralisme?’ in ID, 244. Though the essay, in fact, anticipates much of *Difference and Repetition* and *Logic of Sense*, it was only published in 1973, by which time Deleuze’s public assessment of structuralism had become somewhat less effusive.
  36. On the distinction between virtual differentiation and actual differentiation, see DR, 270 [209].
  37. DR, 236 [182].
  38. ID, 247.
  39. ID, 242. See also DR, 270 [209], where Deleuze, distinguishing the determination pertaining to the virtual structure from that of actualities in terms of mereology, writes that ‘we must carefully distinguish the object in so far as it is complete and the object in so far as it is whole [*entier*]. What is complete is only the ideal part of the object, which participates with other parts of objects in the Idea (other relations, other singular points), but never constitutes an integral whole [*une intégrité*] as such. What the complete determination lacks is the whole set [*l’ensemble*] of relations belonging to actual existence.’

40. In this respect, Deleuze's stance clashes with Piaget's understanding of structuralism as relativizing the relationship between form and content, such that one form can always serve as the content for another. This nesting of forms is insufficient from the vantage point of a theory of multiplicities that wishes to account for the genesis of form out of non-formal elements, what *A Thousand Plateaus* will determine as 'formless functions'. See J. Piaget, *Le structuralisme* (Paris: PUF, 1968), 17–32. This is also why, unlike both Piaget and Vuillemin, Deleuze seems to place little importance on the relationship between structuralism and the algebraic theory of groups formulated by Évariste Galois. Badiou's reading of Deleuze misses this reciprocal implication of structure and genesis, and the former's claim that structuralism is but an analysis of actual beings [*l'étant*] that starts from a *discrete* decomposition of entities neglects the ontological and mereological traits of ideas as variable multiplicities. See his *Deleuze. 'La clameur de l'être'* (Paris: Hachette, 1997), 57–61 [*Deleuze: The Clamor of Being* (Minneapolis: University of Minnesota Press, 2000, 36–9)]. For a critique of this aspect of Badiou's reading and its reliance on a confusion regarding Deleuze's concepts of the distinct-obscure and the clear-confused, see Juliette Simont, 'Critique de la représentation et ontologie chez Deleuze et Badiou (Autour du "virtuel")', in *Alain Badiou: penser le multiple*, ed. C. Ramond (Paris: L'Harmattan, 2002), 469–72.
41. See 'La méthode de dramatisation', ID, 131–62.
42. Though he appears to locate all determination at the level of the actual and ascribes all dynamism and determinability to a virtual conceived as sovereign One-All, Badiou does provide a very stimulating introduction to these two paths of method. See his *Deleuze*, 49–63 [31–40].
43. ID, 131.
44. On the mathematical source for the notion of an adjunct field, see Vuillemin, *La philosophie de l'algèbre*, 222–33. We discussed the notion of a condensation of singularities with regard to Deleuze's schematization of Whitehead's philosophy of individuation in Chapter 2, Section 2.3.
45. DR, 246 [190].
46. DR, 271 [210].
47. The duration of the idea is described by Deleuze in terms of 'an internal temporality, variable in accordance with that which is actualized' (ID, 251); on the immanent spatialization of the idea, Deleuze writes of singularities as 'distributed in a properly problematic field and crop[ping] up in this field as topological events to which no direction is attached' (LS, 127 [104]). For an innovative, if somewhat one-dimensional, treatment of these two aspects of Deleuze's theory of individuation in light of models proposed by contemporary science, see chs 2 and 3 of M. DeLanda, *Intensive Science and Virtual Philosophy* (London: Continuum, 2002).
48. See E. Alliez, 'Deleuze, vitalisme pratique', *Les études philosophiques* 2 (1998), 245–50.
49. Deleuze, *Seminar Transcripts*, 10.03.87. Likewise, in his 'Hume' article for François Chatelet's *Histoire de la philosophie*, he writes: 'The problem is not that of causes, but that of the functioning of relations as effects of causes, and of the practical conditions of this functioning.' ID, 229. In the 1956 essay on Bergson, he also remarks: 'It is difference which is explicative of the thing itself, not its causes.' ID, 72.

50. LS, 149–50 [124].
51. It is important to note that Deleuze introduces this concept into *Difference and Repetition* via a sequence of questions whereby he avows the possible threats it could pose to the theory of determination forwarded by way of the virtual ideas, intensive spatiotemporal dynamisms, and their actualized productions: ‘The most important difficulty, however, remains: is it really difference which relates different to different in these intensive systems? Does the difference between differences relate differences to itself without any other intermediary? When we speak of communication within systems, of coupling and resonance, does this not imply a minimum of resemblance within the series, and an identity in the agent which brings about the communication?’ DR, 156 [119].
52. LS, 55 [41].
53. ‘The important thing, for the in-itself, is that the difference, whether small or large, be internal.’ DR, 158 [120–1].
54. For example, see Deleuze, *Bergsonism*.
55. R. Schürmann, *Heidegger on Being and Acting: From Principles to Anarchy* (Bloomington: Indiana UP, 1990).
56. DR, 317 [246].
57. MP, 327 [267–8].
58. MP, 318 [261].
59. MP, 326 [266].
60. ‘La méthode de dramatisation’, ID, 134. See also B. Paradis, ‘Schémas du temps et philosophie transcendante’, for an interpretation of Deleuze in which speed is ‘a pure quality anterior to any coupling of space and time’ (14).
61. MP, 318 [260].
62. This is Deleuze’s definition of intensive systems – its dependence on Simondon’s thought and terminology is considerable: ‘Every system is an intensive field of individuation constructed on heterogeneous or disparate bordering series, the putting into communication of series under the action of the dark precursor, induces phenomena of *coupling* between series, of *internal resonance* in the system, of *forced movement* in the form of an amplitude that surpasses the series themselves.’ ID, 135–6.
63. DR, 279 [236].
64. DR, 223 [287].
65. See M. Hardt, *Gilles Deleuze: An Apprenticeship in Philosophy* (Minneapolis: University of Minnesota Press, 1993).
66. DR, 324 [247].
67. As Deleuze remarks: ‘any confusion between the two processes, any reduction of individuation to a limit or complication of differentiation, compromises the whole of the philosophy of difference’, DR, 318 [246].
68. Rhythm is a theme of considerable importance to Deleuze’s theory of individuation. On spatiotemporal dynamisms as ‘differential rhythms’, see DR, 280 [217]. On rhythm as haecceity, see MP, 313 [385]. On the role of rhythm in structuralism, Deleuze writes: ‘In structuralism, time is always a time of actualization, following which the elements of virtual coexistence effectuate themselves at different rhythms.’ ID, 251.
69. However, in the theory of individuation of *Difference and Repetition*, ‘the Ideas dominate’ and, whilst they may not be sufficient, in the final analysis they

- constitute the veritable instance of determination. According to this book, therefore: 'Dynamism thus comprises its own power of determining space and time, since it immediately *incarnates* the differential relations, the singularities and the progressivities immanent in the Idea', DR, 282 [218], (*italics mine*). A *Thousand Plateaus* can be understood, to a great extent, as the attempt to emancipate the power of this dynamism from its function as mediating an incarnation ultimately determined in and by the Idea, by the Idea's *sufficiency*.
70. ID, 52. Echoes of this position can be found in Deleuze's last work: 'Actualization belongs to the virtual. The actualization of the virtual is singularity, whilst the actual itself is constituted individually. The actual falls off the plane [of immanence] like fruit, whilst actualization relates it to the plane like what converts the object back into a subject.' See G. Deleuze, 'L'actuel et le virtuel', in G. Deleuze and C. Parnet, *Dialogues*, 181.
  71. ID, 249. In this text, as well as in his early review of Jean Hyppolite's *Logic of Existence* (where the programme of the ontology of difference appears in the guise 'Hegel minus contradiction') some support can be found for Badiou's irreverent assessment, based on the role of memory and time in Hegel and Deleuze: 'The quarrel between Deleuze and Hegel bears on the nature of the operations involved (the negative versus the expressive, the dialectic versus intuition, the vertical deployment versus the "crowned anarchy"), not on the global framework.', *Deleuze*, 96 [64]. Of course, as Chapter 5 should have made abundantly clear, the quarrel over operations is perhaps *the* philosophical quarrel when it comes to the question of individuation.
  72. ID, 267.
  73. On these criteria of subjectivity and praxis at the edges of structuralism, see ID, 266–9.
  74. A. Badiou, 'De la Vie comme nom de l'Être', in *Gilles Deleuze, Immanence et Vie*, ed. E. Alliez *et al.* (Paris: PUF, 1998), 27 ['Of Life as a Name of Being, or, Deleuze's Vitalist Ontology', trans. A. Toscano, *Pli: The Warwick Journal of Philosophy* 10 (2000) 174–90].
  75. G. Deleuze and F. Guattari, *Anti-Oedipe* (Paris: Minuit, 1973), 50 [*Anti-Oedipus* (London: Athlone, 1984), 42]. Hereafter AO. They also write: 'As a general rule, the problem of the relationships between parts and whole continues to be rather awkwardly formulated by classic mechanism and vitalism, so long as the whole is considered as a totality derived from its parts, or as an original totality from which the parts emanate, or as a dialectical totalization', AO, 52 [44]. See also G. Deleuze, *Proust et les signes* (Paris: PUF, 1996), 153, where Deleuze defines this adjunct totality as the transversal [*la transversale*], and LP, 139. In a lecture on Bergson and cinema (5.1.1981), Deleuze will identify mechanism according to three traits: (1) the establishment of an artificially closed system; (2) immobile cuts in movement (e.g., the state of system  $x$  at time  $t$ ); and (3) action by contact.
  76. Deleuze, *Bergsonism*, 105.
  77. We encounter once again the link joining in the final analysis the autopoietic image of organization to an eidetic principle of organic individuation.
  78. AO, 338 [284].
  79. MP, 318–24 [260–5].
  80. AO, 341 [287].

81. *Anti-Virtual: Note on an Exception*. It is in another one of its discussions of these mereological questions that the *Anti-Oedipus* manifests a singular anomaly within Deleuze, and Deleuze and Guattari's work: the apparent attempt to affirm a thoroughgoing Spinozist materialism, *purged of any constitutive or genetic concept of virtuality*, now reduced to a merely derivative and reactive role. As they write: 'We maintain that the cause of the disorder, neurosis or psychosis, is always in desiring-production, in its relation to social production, in their different or conflicting regimes, and the modes of investment that desiring-production performs in the system of social production. *The actual factor is desiring-production ... on the contrary, it is Oedipus that depends on desiring-production, either as a stimulus ... a simple inductor ... or as an effect ... Undecidable, virtual, reactive or reactional [réactionnel]*, such is Oedipus. It is only a reactional formation, a formation that results from a reaction to desiring-production. It is a serious mistake to consider this formation in isolation, abstractly, independently of the actual factor that coexists with it and to which it reacts ... Desiring-production has no existence but an actual one', AO, 153–4 [129–30]. Though this distinction is certainly prepared by *The Logic of Sense* – namely, in the 'Fourteenth Series of Double Causality' – from an evaluative or ethical standpoint such a denigration of the virtual is exceptional in Deleuze's work, where it is instead quite common, even wearying, to encounter visions of a sterile actual ('falling off the virtual like fruit', as he writes in 'The Actual and the Virtual'). To our knowledge, this lonely instance of *actual materialism*, designating the virtual as the by-product of a transcendent usage of the syntheses, has not been remarked upon in any of the secondary literature.
82. Whether as autopoietic machine (Maturana and Varela), organic work of art (Schelling), or natural purpose (Kant).
83. *Recursive evolution* is understood here in terms set out by Kampis, as a process wherein 'new forms can feed back to the system by setting new conditions for subsequent evolution ... evolution should be seen as a process that is its own product', and further, where the following trait is singled out as a feature of recursive evolution: 'whenever a solution is achieved a new task is also defined'. See G. Kampis, 'Computability, Self-Reference and Self-Amendment'. Likewise, in Tim Murphy's reading of Deleuze, 'the conditioned is capable of producing new conditions; the explicate order can alter the implicate order in unpredictable ways.' See T.S. Murphy, 'Quantum Ontology: A Virtual Mechanics of Becoming', in *Deleuze and Guattari: New Mappings in Politics, Philosophy, and Culture*, ed. E. Kaufman and K.J. Heller (Minneapolis: University of Minnesota Press, 1998), 225.
84. See the seminar on 27.02.79 on Simondon and Husserl, in Deleuze, *Seminar Transcripts*, for Deleuze's understanding of modulation.
85. DeLanda, *Intensive Science and Virtual Philosophy*, 28.
86. *Ibid.*, 80.
87. *Ibid.*, 17.
88. DR, 31–2 [20].
89. MP, 350 [286].
90. DeLanda, *Intensive Science and Virtual Philosophy*, 47.
91. *Ibid.*, 2–3.
92. *Ibid.*, 46.



93. See DR, 318 [246] for the statement of the capital importance of this distinction.
94. IG, 161, 32.
95. 'L'actuel et le virtuel', in Deleuze and Parnet, *Dialogues*, 184.
96. DR, 105 [77].
97. DR, 272 [210–11]. On rhythm, see in particular the discussion of Bachelard and metrics in MP, 385 [313].
98. On the role played by the critique of the possible in the formation of the concept of virtual multiplicity, and its Bergsonian roots, see Miguel de Beistegui, *Truth and Genesis*, 248–80. For an inventive, polemical use of the difference between the virtual and the possible, see Keith Ansell Pearson's critique of Dennett in *Philosophy and the Adventure of the Virtual* (London: Routledge, 2001).
99. I dealt with this matter in my review of Badiou's *Deleuze*. See A. Toscano, 'To Have Done with the End of Philosophy', *Pli: The Warwick Journal of Philosophy* 9 (2000) 232–5.
100. Deleuze and Parnet, *Dialogues*, 184.
101. G. Deleuze, 'L'Immanence: une vie ...', *Philosophie* 47 (1995), 3–7.
102. Badiou, *Deleuze*, 79 [52].
103. This question, binding a monism of production to the duality of names is, of course, the question of materialism already encountered with Nietzsche in Chapter 3. Though his critique of the doctrine of two sides of the object is a powerful one, Badiou should be the first to recognize that the necessity of positing a Two is by no means sufficient to doom the materialist theory of univocity. For, as he once wrote: 'Having to distinguish itself from idealism forces materialism to abdicate the essential axiom, monism, and to pose – the thesis of the main idealisms – that there are indeed two regions of being. Nevertheless, it only poses this thesis in order to annul it. For, in truth, there only is one region of being for materialism.', A. Badiou, *Théorie du sujet* (Paris: Seuil, 1982), 208. As Deleuze argues in his 1956 Bergson article, it is by considering the intensity of difference, that is, the question of individuation, that this problem can be faced without eliciting a return to idealism.
104. G. Bachelard, *The Dialectic of Duration* (Manchester: Clinamen, 2000), 40. The reader will recall our discussion of the selfsame tendency at work in Peirce's speculative cosmogony, in Chapter 4, Section 4.5: 'The return to teleology and the temptations of spontaneity'. Parallels between the work of Bergson and Peirce were drawn very early on by William James in his brief but stimulating essay 'On the Notion of Reality as Changing', published in appendix to *Essays in Radical Empiricism and A Pluralistic Universe* (New York: Dutton, 1971), 281–4.
105. DR, 119 [88].
106. DR, 151–2 [115].
107. V. Bergen, 'À propos de la formule de Badiou, "Deleuze un platonicien involontaire"', in *Gilles Deleuze*, ed. P. Verstraeten and I. Stengers (Paris: Vrin, 1998), 24.
108. DR, 152 [116].
109. DR, 117 [86].
110. DR, 155 [118].

## Conclusion

1. A. Toscano, 'Philosophy and the Experience of Construction', in *The New Schelling*, ed. J. Norman and A. Welchman (London: Continuum, 2004).
2. DR, 123 [91].
3. ID, 268. An interesting comparative study could be undertaken here *vis-à-vis* Simondon's notion of the technician or inventor as 'pure individual'.
4. DR, 121 [90].
5. DR, 331–2 [257–8].
6. DR, 333 [259].
7. DR, 327 [254].
8. With reference to structuralism, Deleuze writes of 'a theatre of multiplicities opposed in every respect to the theatre of representation', DR, 248 [192]. It is only when he considers, within the political and libidinal critique of structuralism set out with Guattari, that every theatre is by definition a theatre of representation, that Deleuze will object to 'the theatre taken as a model of production', AO, 365 [306]. The relationship to structuralism once again proves itself very significant with respect both to the terminological and to the conceptual displacements in Deleuze's work.
9. DR, 16 [8].
10. 'La méthode de dramatisation', ID, 158.
11. ID, 30.
12. 'L'île déserte', ID, 16. As Deleuze also writes, 'in philosophy the first time is already the second, this is the notion of ground [*fondement*]'. 'Bergson, 1859–1841', ID, 30
13. 'L'île déserte', ID, 12.
14. ' "Disgregation of the Will": Nietzsche on the Individual and Individuality', 148.

# References

- Alliez, E. 'Deleuze, vitalisme pratique', *Les études philosophiques* 2 (1998) 245–50.
- Alliez, E. (ed.) *Gilles Deleuze. Une vie philosophique* (Paris: Synthélabo, 1998).
- Alliez, E. *Les temps capitaux, 2/1: L'État des choses* (Paris: Cerf, 2000).
- Alliez, E. *The Signature of The World, or, What is Deleuze and Guattari's Philosophy?*, preface by A. Toscano (London: Continuum, 2004).
- Allison, H.E. 'Kant's Critique of Spinoza', in R. Kennington (ed.), *The Philosophy of Baruch Spinoza* (Washington, DC: Catholic University of America, 1980) 199–277.
- Ameriks, K. *Kant and the Fate of Autonomy* (Cambridge: Cambridge University Press, 2000).
- Ansell Pearson, K. *Germinal Life: The Difference and Repetition of Deleuze* (London: Routledge, 1999).
- Ansell Pearson, K. *Philosophy and the Adventure of the Virtual: Bergson and the Time of Life* (London: Routledge, 2001).
- Apel, K.O. *Charles S. Peirce: From Pragmatism to Pragmaticism* (Atlantic Highlands, NJ: Humanities, 1995).
- Aspe, B. 'Être singulier commun', in *Simondon*, ed. P. Chabot (Paris: Vrin, 2002).
- Bachelard, G. *The Dialectic of Duration* (Manchester: Clinamen, 2000).
- Bachelard, S. *A Study of Husserl's Formal and Transcendental Logic* (Evanston, IL: Northwestern University Press, 1968).
- Badiou, A. *Théorie du sujet* (Paris: Seuil, 1982).
- Badiou, A. 'Gilles Deleuze, The Fold: Leibniz and the Baroque', in *Gilles Deleuze and the Theater of Philosophy*, ed. C.V. Boundas and D. Olkowski (London: Routledge, 1994), 51–69.
- Badiou, A. *Deleuze: "La clameur de l'être"* (Paris: Hachette, 1997) [*Deleuze: The Clamor of Being* (Minneapolis: University of Minnesota Press, 2000)].
- Badiou, A. *Court traité d'ontologie transitoire* (Paris: Seuil, 1998).
- Badiou, A. 'De la Vie comme nom de l'Être', in *Gilles Deleuze, Immanence et Vie*, ed. E. Alliez et al. (Paris: PUF, 1998) ['Of Life as a Name of Being, or, Deleuze's Vitalist Ontology', trans. A. Toscano, *Pli: The Warwick Journal of Philosophy* 10 (2000) 174–90].
- Badiou, A. 'Un, multiple, multiplicité(s)', *Multitudes* 1 (2000) 195–211.
- Badiou, A. *Theoretical Writings*, ed. R. Brassier and A. Toscano (London: Continuum, 2004).
- Badiou, A. *Logiques des mondes* (Paris: Seuil, forthcoming).
- Baldwin, J.M. *Dictionary of Philosophy and Psychology* (London: Macmillan, 1901).
- Beiser, F. *The Fate of Reason: German Philosophy from Kant to Fichte* (Cambridge, MA: Harvard UP, 1987).
- Beistegui, M. *Truth and Genesis: Philosophy as Differential Ontology* (Bloomington: Indiana University Press, 2004).
- Bennington, G. 'The End is Here', *Tekhnema: Journal of Philosophy and Technology* 6 (2000) 34–50.

- Bergen, V. 'À propos de la formule de Badiou, "Deleuze un platonicien involontaire"', in *Gilles Deleuze*, ed. P. Verstraeten and I. Stengers (Paris: Vrin, 1998) 19–30.
- Bergson, H. *Œuvres* (Paris: PUF, 1959).
- Boulnois, O. 'Le singulier et les limites de la phénoménologie', *Critique* 45: 509 (1990) 734–46.
- Boulnois, O. 'Genèse de la théorie scotiste de l'individuation', in *Le problème de l'individuation*, ed. P.-N. Mayaud (Paris: Vrin, 1991) 51–77.
- Boulnois, O. *Être et représentation* (Paris: PUF, 1999).
- Bourriau, C. *Lectures de Kant* (Paris: PUF, 2000).
- Buchdahl, G. *Kant and the Dynamics of Reason* (Oxford: Blackwell, 1992).
- Canguilhem, G. *La connaissance de la vie* (Paris: Vrin, 1971).
- Canguilhem, G. *Études d'histoire et des philosophies des sciences concernant les vivants et la vie* (Paris: Vrin, 1994).
- Cassirer, E. *The Problem of Knowledge* (New Haven, CT: Yale University, 1950).
- Chabot, P. (ed.) *Simondon* (Paris: Vrin, 2002).
- Chabot, P. *La philosophie de Simondon* (Paris: Vrin, 2003).
- Combes, M. *Simondon. Individu et collectivité* (Paris: PUF, 1999).
- Courtine, J.-F. *Suarez et le système de la métaphysique* (Paris: PUF, 1990).
- Cover, J.A. and O'Leary-Hawthorne, J. *Substance and Individuation in Leibniz* (Cambridge: Cambridge University Press, 1999).
- Crawford, C. *The Beginnings of Nietzsche's Theory of Language* (New York: de Gruyter, 1988).
- Danaher, D.S. 'Iteration and the Peircean Habit', in *The Peirce Seminar Papers*, vol. IV, ed. M. Shapiro (New York: Berghahn, 1999) 564–87.
- Debaise, D. (ed.) 'Politiques de l'individuation: penser avec Simondon', special section, *Multitudes* 18 (2004) 15–106.
- Debru, C. 'L'introduction du concept d'organisme dans la philosophie kantienne: 1790–1803', *Archives de philosophie* 43 (1980) 487–514.
- DeLanda, M. *Intensive Science and Virtual Philosophy* (London: Continuum, 2002).
- Deleuze, G. *Empirisme et subjectivité* (Paris: PUF, 1953).
- Deleuze, G. *Le bergsonisme* (Paris: PUF, 1966) [*Bergsonism* (New York: Zone, 1988)].
- Deleuze, G. *Différence et répétition* (Paris: PUF, 1968) [*Difference and Repetition* (London: Athlone, 1994)].
- Deleuze, G. *Logique du sens* (Paris: Minuit, 1969) [*The Logic of Sense* (New York: Columbia University, 1990)].
- Deleuze, G. *Kant's Critical Philosophy* (London: Athlone, 1984).
- Deleuze, G. *Cinéma 2. L'image temps* (Paris: Minuit, 1985).
- Deleuze, G. *Foucault* (Paris: Minuit, 1986).
- Deleuze, G. *Le Plé. Leibniz et le baroque* (Paris: Minuit, 1988).
- Deleuze, G. *Pourparlers* (Paris: Minuit, 1990).
- Deleuze, G. 'L'immanence: une vie ...', *Philosophie* 47 (1995) 3–7.
- Deleuze, G. *Proust et les signes* (Paris: PUF, 1996).
- Deleuze, G. *L'île déserte et autres textes*, ed. D. Lapoujade (Paris: Minuit, 2002).
- Deleuze, G. *Seminar Transcripts*, [www.webdeleuze.com/php/sommaire.html](http://www.webdeleuze.com/php/sommaire.html)
- Deleuze, G. and Guattari, F. *Anti-Œdipe* (Paris: Minuit, 1973) [*Anti-Oedipus* (London: Athlone, 1984)].
- Deleuze, G. and Guattari, F. *Mille plateaux* (Paris: Minuit, 1980) [*A Thousand Plateaus* (London: Athlone, 1988)].

- Deleuze, G. and Guattari, F. *Qu'est-ce que la philosophie?* (Paris: Minuit, 1991).
- Deleuze, G. and Parnet, C. *Dialogues* (Paris: Flammarion, 1996).
- Duns Scot. *Le principe d'individuation*, ed. G. Sondag (Paris: Vrin, 1992).
- During, É. 'Deleuze and Nietzsche: On Frivolous Propositions and Related Matters', *Pli: The Warwick Journal of Philosophy* 11 (2001) 62–78.
- Emery, F.E. (ed.) *Systems Thinking* (London: Penguin, 1968).
- Fagot-Largeault, A. 'L'individuation en biologie', in *Gilbert Simondon: Une pensée de l'individuation et de la technique* (Paris: Albin Michel, 1994).
- Feibleman, J.K. *An Introduction to the Philosophy of Charles S. Peirce* (Cambridge, MA: MIT Press, 1970).
- Ferraris, M. *L'immaginazione* (Bologna: Il Mulino, 1996).
- Förster, E. *Kant's Final Synthesis: An Essay on Kant's Opus Postumum* (Cambridge, MA: Harvard University, 2000).
- Frank, W.A. and Wolter, A.B. *Duns Scotus, Metaphysician* (West Lafayette, IN: Purdue University Press, 1995).
- Garelli, J. *Rythmes et mondes. Au revers de l'identité et de l'altérité* (Grenoble: J. Millon, 1991).
- Garelli, J. 'Transduction et information', in *Gilbert Simondon: Une pensée de l'individuation et de la technique* (Paris: Albin Michel, 1994).
- Gilson, E. *La philosophie au Moyen Age* (Paris: Payot, 1996).
- Guyer, P. 'Organisms and the Unity of Science', in *Kant and the Sciences*, ed. E. Watkins (Oxford: Oxford University, 2001).
- Haack, S. 'Pragmatism and Ontology: Peirce and James', *Revue internationale de philosophie* 31 (1977) 377–400.
- Haar, M. *Nietzsche and Metaphysics* (Albany: SUNY, 1996).
- Hallward, P. 'The Limits of Individuation, or How to Distinguish Deleuze and Foucault', *Angelaki: A Journal of the Theoretical Humanities* 5: 2 (2000) 93–110.
- Hallward, P. 'Recent French Philosophy: The Singular and the Specific', *Radical Philosophy* 99 (2000) 6–18.
- Hamacher, W. 'Disintegration of the Wee': Nietzsche a Individuality and the Individual in *Premises* (Stanford, CA: Stanford University Press).
- Hardt, M. *Gilles Deleuze: An Apprenticeship in Philosophy* (Minneapolis: University of Minnesota Press, 1993).
- Heidegger, M. *The Metaphysical Foundations of Logic* (Bloomington: Indiana University Press, 1984).
- Heidegger, M. *Pathmarks*, ed. W. McNeill (Cambridge: Cambridge University, 1998).
- Hendriks-Jansen, H. *Catching Ourselves in the Act: Situated Activity, Interactive Emergence, Evolution, and Human Thought* (Cambridge, MA: MIT Press, 1996).
- Hill, C.O. and Rosado Haddock, G.E. (eds) *Husserl or Frege?: Meaning, Objectivity and Mathematics* (Chicago: Open Court, 2000).
- Hottois, G. *Simondon et la philosophie de la 'culture technique'* (Brussels: De Boeck, 1993).
- Hübner, K. 'Leib und Erfahrung in Kants Opus Postumum', *Zeitschrift für philosophische Forschung* 7: 2 (1953) 204–19.
- Husserl, E. *Formal and Transcendental Logic* (The Hague: Martinus Nijhoff, 1969).
- Husserl, E. *Analysis Concerning Passive and Active Synthesis: Lectures on Transcendental Logic* (Dordrecht: Kluwer, 2001).
- Husserl, E. *Logical Investigations*, vol. I, ed. D. Moran (London: Routledge, 2001).

- James, W. *Essays in Radical Empiricism/A Pluralistic Universe* (New York: Dutton, 1971).
- James, W. *The Principles of Psychology*, 2 vols (New York: Dover, 1950).
- James, W. *Psychology: Briefer Course* (Cambridge, MA: Harvard University Press, 1984).
- Janicaud, D. 'L'habitude selon Maine de Biran et Ravaisson', *Revue philosophique de la France et de l'étranger* 158 (1968) 65–87.
- Jankélévitch, V. *Henri Bergson* (Paris: PUF, 1954).
- Jonas, H. 'Spinoza's Theory of the Organism', in *Philosophical Essays: From Ancient Creed to Modern Man* (Chicago: University of Chicago Press, 1974).
- Kampis, G. 'Computability, Self-Reference and Self-Amendment', *Communication and Cognition* 12 (1995) 91–109.
- Kant, I. *Opus Postumum* (Italian edition), ed. V. Mathieu (Bari: Laterza, 1984).
- Kant, I. *Metaphysical Foundations of Natural Science*, in *Philosophy of Material Nature* (New York: Hackett, 1985).
- Kant, I. *Critique of Judgment*, trans. W. Pluhar (New York: Hackett, 1987).
- Kant, I. *Opus Postumum*, ed. and trans. E. Förster (Cambridge: Cambridge University Press, 1993).
- Kant, I. *Critique of Pure Reason*, ed. and trans. P. Guyer and A.W. Wood (Cambridge: Cambridge University Press, 2000).
- Kemp-Pritchard, I. 'Peirce on Individuation', *Transactions of the Charles S. Peirce Society* 14 (1978) 83–100.
- Kerszberg, P. *Critique and Totality* (Albany: SUNY, 1997).
- Lalande, A. *Vocabulaire critique et technique de la philosophie* (Paris: PUF, 1956).
- Lange, F.A. *History of Materialism and Criticism of its Present Importance*, 2nd edn, 3 vols (London: Trübner, 1879–81; reprint, New York: Arno, 1974).
- Locke, G. 'Peirce's Metaphysics: Evolution, Synechism, and the Mathematical Conception of the Continuum', *Transactions of the Charles S. Peirce Society* 36: 1 (2000) 133–47.
- Longuenesse, B. *Kant and the Capacity to Judge* (Princeton, NJ: Princeton University Press, 1998).
- Luhmann, N. *Social Systems* (Stanford, CA: Stanford University Press, 1995).
- Mahner, M. and Bunge, M. *Foundations of Biophilosophy* (New York: Springer, 1997).
- Malik, S. 'Machines and Fabrication: Organisation and the Motive-Formative Difference', *Tekhnema: Journal of Philosophy and Technology* 6 (2000) 128–66.
- Martinez, F.J. 'Échos husserliens dans l'œuvre de G. Deleuze', in *Gilles Deleuze*, ed. P. Verstraeten and I. Stengers (Paris: Vrin, 1998) 105–17.
- Marty, F. 'La question de l'individuation chez Kant', in *Le problème de l'individuation*, ed. P.-N. Mayaud (Paris: Vrin, 1991) 105–21.
- Mathieu, V. *La filosofia trascendentale e l' Opus Postumum di Kant* (Torino: Filosofia, 1958).
- Mathieu, V. *Introduzione a Leibniz* (Bari: Laterza, 1976).
- Maturana, H. and Varela, F. *Autopoiesis and Cognition* (Amsterdam: Reidel, 1980).
- Mayaud, P.-N. (ed.) *Le problème de l'individuation* (Paris: Vrin, 1991).
- Miller, E.P. 'Empedoclean Nature: Nietzsche's Critique of Teleology and the Organism through Goethe and Kant', *International Studies in Philosophy* 31: 3 (1998) 111–22.
- Moles, A. *Nietzsche's Philosophy of Nature and Cosmology* (New York: Lang, 1990).

- Mugnai, M. *Introduzione alla filosofia di Leibniz* (Torino: Einaudi, 2001).
- Müller-Lauter, W. *Nietzsche: The Contradictions of his Philosophy and his Philosophy of Contradiction* (Chicago: University of Illinois Press, 1999).
- Müller-Sievers, H. *Self-Generation: Biology, Philosophy, and Literature Around 1800* (Stanford, CA: Stanford University Press, 1997).
- Murphey, M.G. *The Development of Peirce's Philosophy* (Cambridge, MA: Harvard University Press, 1961).
- Murphy, T.S. 'Quantum Ontology: A Virtual Mechanics of Becoming', in *Deleuze and Guattari: New Mappings in Politics, Philosophy, and Culture*, ed. E. Kaufman and K.J. Heller (Minneapolis: University of Minnesota Press, 1998) 211–29.
- Nabais, N. 'Indívduo e Individualidade em Nietzsche', in *Metafísica do Trágico: Estudos sobre Nietzsche* (Lisbon: Relógio D'Água, 1997).
- Nancy, J.-L. 'Nietzsche's Thesis on Teleology', in *Looking after Nietzsche*, ed. L.A. Rickels (Albany: SUNY, 1990) 49–66.
- Nietzsche, F. *Historisch-Kritische Gesamtausgabe* (Munich: C.H. Beck, 1933–40).
- Nietzsche, F. *The Will to Power* (New York: Vintage, 1968).
- Nietzsche, F. *Philosophy and Truth: Selections from Nietzsche's Notebooks of the Early 1870s*, ed. D. Brazeale (Atlantic Highlands, NJ: Humanities, 1979).
- Nietzsche, F. *Appunti Filosofici 1867–1869*, ed. G. Campioni and F. Gerratana (Milano: Adelphi, 1993).
- Nietzsche, F. *Unfashionable Observations* (Stanford, CA: Stanford University Press 1995).
- Nobo, J.L. 'From Creativity to Ontogenetic Matrix: Learning from Whitehead's Account of the Ultimate', *Process Thoughts* 8 (1998).
- Orsucci, A. *Dalla biologia cellulare alle scienze dello spirito. Aspetti del dibattito sull'individualità nell'Ottocento tedesco* (Bologna: Il Mulino, 1992).
- Oyama, S. *The Ontogeny of Information: Developmental Systems and Evolution*, 2nd edn (Durham: Duke University, 2000).
- Oyama, S., Griffiths, P.E., and Gray, R.D. *Cycles of Contingency: Developmental Systems and Evolution* (Cambridge, MA: MIT, 2001).
- Paradis, B. 'Schémas du temps et philosophie transcendante', *Philosophie* 47 (1995) 10–27.
- Peirce, C.S. *The Essential Peirce: Selected Philosophical Writings*, vol. 1 (1867–93), ed. N. Houser and C. Kloesel (Bloomington: University of Indiana Press, 1992).
- Peirce, C.S. *The Essential Peirce: Selected Philosophical Writings*, vol. 2 (1893–1913), ed. Peirce Edition Project (Bloomington: University of Indiana Press, 1998).
- Philonenko, A. 'L'antinomie du jugement téléologique chez Kant', *Revue de métaphysique et de morale* 82 (1977) 13–37.
- Philonenko, A. *Le transcendantal et la pensée moderne. Etudes d'histoire de la philosophie* (Paris: PUF, 1989).
- Piaget, J. *Le structuralisme* (Paris: PUF, 1968).
- Piaget, J. *Biology and Knowledge* (Chicago: University of Chicago Press, 1971).
- Pinchard, B. 'Le principe d'individuation dans la tradition aristotélicienne', in *Le problème de l'individuation*, ed. P.-N. Mayaud (Paris: Vrin, 1991) 27–50.
- Porter, J.I. *The Invention of Dionysus* (Stanford, CA: Stanford University Press, 2000).
- Raposa, M.L. 'Habits and Essences', *Transactions of the Charles S. Peirce Society* 20 (1984) 147–68.
- Ravaisson, F. *De l'Habitude* (Paris: Payot & Rivages, 1997).

- Rescher, N. *Kant and the Reach of Reason* (Cambridge: Cambridge University Press, 2000).
- Riemann, B. 'On the Hypotheses which lie at the Bases of Geometry' (1854), *Nature* 8: 183–4 (1973) 14–7, 36, 37.
- Roqué, A.J. 'Self-Organisation: Kant's Concept of Teleology and Modern Chemistry', *Review of Metaphysics* 39 (1985) 107–35.
- Rorty, R. 'Matter and Event', in *The Concept of Matter in Modern Philosophy*, ed. E. McMullin (London: Notre Dame, 1963) 221–51.
- Ruyer, R. 'La quasi-information', *Revue philosophique de la France et de l'étranger* 155 (1965) 285–302.
- Schelling, F.W.J. *Ideas for a Philosophy of Nature* (Cambridge: Cambridge University Press, 1988).
- Schlanger, J. *Les métaphores de l'organisme* (Paris: L'Harmattan, 1995).
- Schopenhauer, A. *The World as Will and Representation* (New York: Dover, 1969).
- Schürmann, R. *Heidegger on Being and Acting: From Principles to Anarchy* (Bloomington: Indiana University Press, 1990).
- Shannon, C.E. and Weaver, W. *The Mathematical Theory of Communication* (Urbana, IL: University of Illinois Press, 1949).
- Shusterman, R. 'Nietzsche and Nehemas on Organic Unity', *Southern Journal of Philosophy*, 26: 3 (1988) 379–92.
- Simondon, G. *L'individuation psychique et collective* (Paris: Aubier, 1989).
- Simondon, G. *Du mode d'existence des objets techniques* (Paris: Aubier, 1989 [1958]).
- Simondon, G. *L'individu et sa genèse physico-biologique* (Grenoble: J. Millon, 1995 [1964]).
- Simont, J. 'Critique de la représentation et ontologie chez Deleuze et Badiou (Autour du "virtuel")', in *Alain Badiou: penser le multiple*, ed. C. Ramond (Paris: L'Harmattan, 2002) 457–76.
- Smith, D.W. 'Deleuze's Theory of Sensation: Overcoming the Kantian Duality', in *Deleuze: A Critical Reader*, ed. P. Patton (Oxford: Blackwell, 1996) 29–56.
- Spade, P.V. (ed.) *Five Texts on the Mediaeval Problem of Universals: Porphyry, Boethius, Abelard, Duns Scotus, Ockham* (Indianapolis, IN: Hackett, 1994).
- Stack, G.J. *Lange and Nietzsche* (Berlin: de Gruyter, 1983).
- Steinbock, A.J. *Home and Beyond: Generative Phenomenology After Husserl* (Evanston, IL: Northwestern University Press, 1995).
- Stengers, I. 'Whitehead' (29.10.1985), in *Les séminaires de Félix Guattari*, [www.revue-chimeres.org/guattari/semin/semin.html](http://www.revue-chimeres.org/guattari/semin/semin.html)
- Stengers, I. *Cosmopolitiques*, vol. vi: *La vie et l'artifice: visages de l'émergence* (Paris: Synthélabo, 1998).
- Stengers, I. *Penser avec Whitehead: une libre et sauvage création de concepts* (Paris: Seuil, 2002).
- Stiegler, B. *Nietzsche et la biologie* (Paris: PUF, 2001).
- Swift, P. 'Nietzsche on Teleology and the Concept of the Organic', *International Studies in Philosophy* 31: 3 (1998).
- Thibaud, P. 'Peirce on Proper Names and Individuation', *Transactions of the Charles S. Peirce Society* 23 (1987) 521–38.
- Toscano, A. 'Fanaticism and Production: On Schelling's Philosophy of Indifference', *Pli: The Warwick Journal of Philosophy* 8 (1999) 46–70.
- Toscano, A. 'To Have Done with the End of Philosophy', *Pli: The Warwick Journal of Philosophy* 9 (2000) 232–5.



- Toscano, A. 'L'essere interattivo: appunti "simondoniani" su informazione e intelligenza sociale', *DeriveApprodi* 21 (2002) 88–91.
- Toscano, A. 'La disparation: politique et sujet chez Simondon', *Multitudes* 18 (2004) 103–9.
- Toscano, A. 'Philosophy and the Experience of Construction', in *The New Schelling*, ed. J. Norman and A. Welchman (London: Continuum, 2004).
- Tursi, R. 'William James's Narrative of Habit', *Style* 33: 1 (1999) 67–87.
- Varela, F. *Autonomie et connaissance. Essai sur le vivant* (Paris: Seuil, 1989).
- Verstraeten, P. and Stengers I. (eds) *Gilles Deleuze* (Paris: Vrin, 1998).
- Villani, A. 'Deleuze et l'anomalie métaphysique', in *Gilles Deleuze. Une vie philosophique*, ed. E. Alliez (Paris: Synthélabo, 1998) 43–53.
- Vuillemin, J. *La philosophie de l'algèbre* (Paris: PUF, 1962).
- Weber, A. and Varela F.J., 'Life after Kant: Natural Purposes and the Autopoietic Foundations of Biological Individuality', *Phenomenology and the Cognitive Sciences* 1: 2 (2002) 97–126.
- Werkmeister, W.H. 'The Universalistic Evolutionism of Charles Sanders Peirce', *Southern Journal of Philosophy* 9 (1971) 327–33.
- Whitehead, A.N. *Science and the Modern World* (London: Penguin, 1938 [1926]).
- Whitehead, A.N. *Adventures of Ideas* (New York: Free Press, 1961 [1933]).
- Whitehead, A.N. *Modes of Thought* (New York: Free Press, 1966 [1938]).
- Whitehead, A.N. *Concept of Nature* (Cambridge: Cambridge University Press, 1971 [1920]).
- Whitehead, A.N. *Process and Reality*, ed. D.R. Griffin and D.W. Sherburne (New York: Free Press, 1978 [1929]).
- Zammito, J.H. *The Genesis of Kant's Critique of Judgment* (Chicago: University of Chicago Press, 1992).
- Žižek, S. *Organs Without Bodies: On Deleuze and Consequences* (London: Routledge, 2003).

# Index of Names

- Adorno, T.W. 169  
Alféri, P. 203  
Alliez, E. xi, 203, 230  
Allison, H.E. 209  
Althusser, L. 167  
Ameriks, K. 22, 205  
Ansell Pearson, K. 218, 234  
Apel, K.O. 220, 222, 223  
Aquinas 5  
Aristotle 4–7, 9, 12, 14, 15, 27,  
32, 65, 111, 133, 142, 160, 161,  
190, 212  
Aspe, B. 204  
  
Bachelard, G. 194, 195, 234  
Bachelard, S. 229  
Badiou, A. xi–xiii, 30, 160, 166, 167,  
180, 187–95, 207, 212, 227, 229,  
230, 232, 234  
Baldwin, J.M. 222  
Beiser, F. 24, 47, 205  
Beistegui, M. 14, 204, 234  
Bennington, G. 32, 42, 83, 207, 209  
Bergen, V. 195, 196, 234  
Bergson, H. 70, 98, 112, 116, 118,  
132, 141, 142, 159, 162, 165–7, 179,  
187–9, 192, 194, 195, 218, 219, 227,  
228, 232, 234  
Boulnois, O. 8–10, 203, 204, 229  
Bouriau, C. 204  
Brandom, R. x, 209  
Brassier, R. xiii  
Breton, S. 201  
Brunschvicg, L. 110, 111  
Buchdal, G. 205–7  
Bunge, M. 210, 224  
Butler, S. 182  
  
Canguilhem, G. 207, 210, 212  
Cantor, G. 130  
Cassirer, E. 205  
Chabot, P. 223  
Chladni, E. 105  
  
Combes, M. 138, 223–6  
Courtine, J.-F. 229  
Couturat, L. 110, 111  
Cover, J.A. 209, 212  
Crawford, C. 215, 216  
  
Darwin, C. 70, 94, 95, 99, 100, 125,  
147, 218  
Debru, C. 19, 21, 32, 36, 204, 207,  
208, 210, 215  
DeLanda, M. 167, 184–7, 230, 233  
Deleuze, G. x–xiii, 1–3, 7–9, 13, 15,  
16, 21, 22, 68–72, 75, 76, 82, 83,  
105, 106, 114, 115, 121, 126, 131,  
132, 135, 141, 142, 145, 151, 153,  
157–201, 203, 204, 206, 207, 209,  
211–14, 217–19, 225–35  
Democritus 85, 94  
Dennett, D. x  
Derrida, J. 169  
Descartes, R. xi, 22, 65, 160,  
214, 221  
Deussen, P. 215  
Diogenes Laertius 85  
Duns Scotus 6–10, 12, 15, 19, 123,  
126–8, 133, 176, 203  
During, E. 215  
  
Egger, V. 111  
Empedocles 94, 99  
Epicurus 40  
  
Fagot-Largeault, A. 223, 225  
Feibleman, J.K. 220  
Ferraris, M. 116, 219  
Fischer, K. 87  
Förster, E. 55, 210, 211, 215  
Foucault, M. x, 167  
Frank, W.A. 203  
  
Galois, E. 230  
Garelli, J. 81, 143, 154, 155, 204,  
207, 214, 224–6

- Goethe, J.W. 97, 102  
 Gray, R.D. 223  
 Griffiths, P.E. 223  
 Guattari, F. x–xiii, 145, 159, 163, 175, 176, 178, 180, 181, 183, 184, 186, 187, 226, 232, 233, 235  
 Guyer, P. 42, 53, 207, 209, 210, 219
- Haack, S. 220, 222  
 Haar, M. 218  
 Hallett, H.F. 209  
 Hallward, P. 215  
 Hamacher, W. 201, 216  
 Hardt, M. 231  
 Hegel, G.W.F. xi–xiii, 40, 160, 179, 232  
 Heidegger, M. 1, 4, 11–12, 15, 65–7, 154, 173, 204, 206, 207, 213, 229  
 Heim, M. 66  
 Heisenberg, W. 154  
 Hendriks-Jansen, H. 147–9, 225  
 Herder, J.G. 23, 42  
 Hill, C.O. 229  
 Homer 85  
 Hottois, G. 223, 224, 226  
 Hübner, K. 80, 215  
 Hume, D. 114–16, 121, 126  
 Husserl, E. 165, 166, 186, 213, 229, 233  
 Hyppolite, J. 232
- James, W. 110, 120–3, 125, 129, 220, 234  
 Jankélévitch, V. 218  
 Janicaud, D. 110, 219  
 Jonas, H. 209
- Kampis, G. 126, 193, 197, 221, 233  
 Kant, I. xi–xiii, 1–4, 9–12, 15, 16, 19–62, 67, 68, 72–4, 77–91, 94, 95, 97–102, 104–6, 116–18, 120, 122, 129, 130, 132, 134, 136–8, 141, 150–3, 156–60, 163, 164, 168, 180, 182, 197, 199, 204–11, 215, 216, 218, 219, 228, 229, 233  
 Kautsky, K. xii  
 Kemp-Pritchard, I. 126, 221, 222  
 Kerszberg, P. 21, 204
- La Mettrie, J. xii  
 Lacan, J. 173  
 Lachelier, J. 110–12, 221  
 Lalande, A. 110–14, 116, 117, 219, 221  
 Lamarck, J.-B. 125  
 Lange, F.A. 86–8, 93–7, 99, 101, 102, 216, 217, 228  
 Laruelle, F. x  
 Leibniz, G.W. xi, 7, 12, 25, 29, 32, 63–70, 72, 76, 117, 118, 137, 138, 160, 161, 164, 170, 172, 203, 207, 212–14, 228  
 Lemoine, A. 113  
 Locke, G. 130, 131, 222  
 Longuenesse, B. 206, 215  
 Luhmann, N. 56, 211
- Macherey, P. x  
 Mahner, M. 210, 224  
 Maine de Biran 110, 112, 114, 116, 219  
 Malik, S. 59, 208, 210, 212  
 Martinez, F.J. 215, 229  
 Marty, F. 210  
 Mathieu, V. 31, 32, 48, 80, 89, 207, 208, 210, 215  
 Maturana, H. 56, 59, 211, 212, 233  
 Maudsley, H. 109  
 Mayaud, P.-N. 203  
 Mentré, F. 113  
 Merleau-Ponty, M. 54  
 Miller, E.P. 216  
 Moles, A. 219  
 Müller-Lauter, W. 110, 217–19  
 Murphey, M.G. 220, 222  
 Murphy, T.S. 233
- Nabais, N. 89, 110, 216  
 Nageli, E. 216  
 Nancy, J.-L. 216, 218  
 Newton, I. 21, 24, 25, 29, 77, 206, 207  
 Nietzsche, F. xii, 1, 22, 68, 82–106, 109, 110, 112, 116, 120, 122, 132, 134, 136, 144, 156, 157, 171, 182, 193, 195, 209, 215–19, 228  
 Nobo, J.L. 213

- Ockham 7, 129, 203  
 O'Leary-Hawthorne, J. 209, 212  
 Orsucci, A. 216  
 Oyama, S. 147, 149, 152, 179,  
 223–5
- Paradis, B. 231  
 Parmenides 153  
 Parnet, C. 219, 232, 234  
 Peirce, C.S. xii, 1, 2, 3, 16, 22, 70, 83,  
 106, 110, 114, 115, 121–38, 151,  
 156, 157, 167, 171, 197, 220–22,  
 224, 234  
 Philonenko, A. 26, 38–40, 45,  
 208, 213  
 Piaget, J. 185, 220, 230  
 Pinchard, B. 5, 6, 13, 203  
 Plato xi, 6, 77, 142, 158, 160,  
 214, 223  
 Poincaré, J.H. 81, 215  
 Porphyry 5–8, 10, 160  
 Porter, J.I. 91, 216  
 Protagoras 94
- Quine, W.V.O. x, 1
- Raposa, M.L. 127, 220, 223  
 Ravaisson, F. 110, 111, 113, 116–21,  
 126, 134, 219, 220, 222  
 Renouvier, C. 113  
 Rescher, N. 204, 205, 210  
 Riemann, B. 141, 165, 166, 229  
 Rohde, E. 215  
 Roqué, A.J. 35, 204, 207, 208  
 Rorty, R. 64, 76, 212–14  
 Roux, W. 216, 219  
 Russell, B. 64  
 Ruyer, R. 143, 182, 224
- Schelling, F.W.J. xi, 1, 10, 25, 88,  
 116, 119, 227, 233, 235  
 Schlanger, J. 210
- Schopenhauer, A. 86–98, 103–5, 112,  
 120, 216, 217, 227  
 Schürmann, R. 173, 231  
 Shannon, C.E. 144, 224  
 Shusterman, R. 218  
 Simondon, G. xii, 1–3, 6, 13, 16, 51,  
 57, 59, 60, 70, 79, 82, 83, 106, 125,  
 131, 135–58, 162, 167, 171–3, 177,  
 178, 188, 193, 195, 197, 199, 204,  
 208, 210, 212, 219, 223–6, 228, 231,  
 233, 235  
 Simont, J. 230  
 Spade, P.V. 203  
 Spinoza, B. 24, 40, 41, 47, 175, 186,  
 209, 228, 233  
 Stack, G.J. 216  
 Steinbock, A.J. 213  
 Stengers, I. 70, 71, 214, 225  
 Stiegler, B. 216  
 Swift, P. 216
- Thibaud, P. 220  
 Tursi, R. 220
- Vaihinger, H. 81, 215  
 Varela, F. 56, 59, 211, 212, 233  
 Villani, A. 226  
 Virchow, R. 97, 102  
 Von Baer, K.E. 216  
 Vuillemin, J. 229, 230
- Wahl, J. 194  
 Weaver, W. 144, 224  
 Weber, A. 211  
 Werkmeister, W.H. 221  
 Whitehead, A.N.W. xi, 1, 42, 60–78,  
 81–3, 157, 160, 172, 188, 212–14,  
 217, 228, 230  
 Wolter, A.B. 203
- Zammito, J.H. 20, 204–6, 211  
 Žižek, S. xii

# Index of Concepts

- Abstract machine 186
- Abstraction 5, 8, 10, 15, 62, 64, 78, 90,  
102, 119, 150, 165, 166, 176, 193
- Aliquid 8, 9
- Allonomy 55–60, 77
- Allopoiesis 59
- Analogy 14, 25, 27, 29, 32, 34, 36,  
39–41, 44, 47–50, 98, 99, 101,  
118–20, 122, 126, 149, 152, 190
- Anomaly, anomalous individuation  
1–4, 9, 10, 13–16, 19, 20, 27, 30,  
32, 34, 43–6, 49, 52, 56, 58, 79,  
81, 83, 88, 97, 102, 104, 106, 109,  
110, 114, 136, 153, 156–9, 171,  
174–8, 188, 195, 196, 199–201
- Antinomy 23, 32, 36–40, 43, 44, 47,  
50, 58, 74, 76–9, 81, 83, 88, 109,  
120, 137, 151, 158, 180
- Asymmetry, dyssymmetry 14, 93, 94,  
104, 105, 109, 146, 169, 171, 172,  
175, 178, 179, 182, 184, 185, 190
- Atom, atomism 14, 40, 49, 51, 52,  
57, 58, 73, 94, 95, 103, 104, 115,  
116, 121, 128–30, 134, 138, 142,  
144, 168, 184
- Autonomy 2, 3, 10, 22, 23, 26, 33,  
41, 42, 55–60, 67, 68, 73, 77–9,  
83, 119, 132, 136, 137, 150–3,  
158, 163–8, 172, 179, 180, 183,  
184, 192, 193
- Becoming 62, 68, 72, 75, 76, 82, 87,  
103–5, 117, 121, 123, 127, 128,  
132–5, 138, 149–51, 167, 170,  
171, 174, 176–9, 183, 186, 196,  
199–201
- Being *see* Ontology
- Biophilosophy 22, 36, 55, 86, 88,  
125, 180, 181
- Canalization 121, 123, 220
- Cause, causation, causality 4, 22, 25,  
29–36, 39–43, 46–9, 51–9, 61, 69,  
71–5, 77, 81, 88, 98–101, 103,  
109, 115, 120, 125, 133, 134, 149,  
151, 154, 169–72, 174, 178, 184,  
185, 187, 194
- Chance 97, 99, 100, 110, 122–9, 131,  
132, 134, 135, 151
- Code 142–7, 179
- Cognition 10, 21–32, 34, 43, 48, 49,  
52–4, 57, 63, 72, 79, 83, 89, 93,  
96, 104, 109, 133, 134, 149, 152,  
153
- Concrescence 63, 67, 69, 71, 74–7,  
82, 83
- Construction, constructivism 3, 16,  
83, 101, 141, 148, 150, 152, 154,  
162, 166, 171, 176, 188, 197, 199,  
201
- Contingency 40–2, 48, 93, 96, 103
- Desire 27, 35, 41, 42, 48, 49, 52, 82,  
97, 101, 119, 122, 126, 181
- Determination 7, 10, 27, 29, 31–3,  
35, 46, 50, 66, 76, 130, 152,  
159–64, 167–71, 174, 177, 179,  
189–95, 197, 200
- Dialectic 14, 39, 40, 95, 101, 162,  
163, 165, 189
- Difference, different/ciation,  
differentiator 3, 6–9, 11, 13, 15,  
26, 63, 64, 77, 117, 119, 120, 125,  
135, 137, 139–42, 151, 156–201  
*see also* Ontological difference
- Disparate, disparate/ness, disparation  
14, 60, 136–46, 149–51, 155, 158,  
173, 177, 178, 193
- Dramatization 169, 175, 177, 178,  
180, 193, 200
- Dynamical systems theory 148
- Emergence 125, 141, 145, 146, 148,  
149, 187
- Empiricism 28, 114, 115, 121
- Ens 8–10, 12

- Essence 8, 26, 75, 94, 161, 168–70, 177, 178
- Event 28–31, 62–4, 67–74, 77, 83, 110, 113, 125, 134, 145–7, 150, 155, 161, 170, 172, 175, 180, 182, 188, 192
- Evolution 70, 87, 116, 124–34, 183, 193, 197
- Fanaticism 158, 227
- Feeling of life 77
- Field, preindividual field,  
transcendental field 2, 13, 15, 55, 67, 77, 125, 146, 149, 150, 155, 158, 161, 165, 170–2, 174, 177, 182, 186, 197, 199, 200
- Form 5, 6, 8, 14, 21, 34, 41, 42, 47, 50, 76, 103, 104, 119, 139, 145–7, 151, 153, 163, 165, 168, 175, 181, 183, 184, 195–7, 200, 201
- Functionalism, functions 180–7
- Genesis, ontogeny, ontogenesis 2, 3, 6, 9–11, 14, 15, 23, 24, 45, 52, 54, 57–9, 62, 65, 70–2, 75–7, 81–3, 89, 93, 97, 99, 101, 104, 105, 114, 115, 118–20, 122, 124–6, 133, 134, 136, 143–8, 151, 153, 156, 158, 169, 171, 176–81, 184–94, 197, 199–201
- Gestalt 139, 168
- 'Ghost-in-the-machine machine'  
179, 180
- Groups 185
- Habit 83, 109–35, 137, 138, 151, 156, 158, 171, 189, 196
- Haecceity 7–11, 126, 128, 161, 176, 178, 182, 199, 200
- Heterogenesis 9, 13, 16, 123, 158, 165, 174, 179, 180
- Heteronomy 2, 3, 16, 22, 24, 31, 35, 36, 42, 57, 73, 151, 162–5, 183, 184
- Homeostasis 182, 183
- Hylemorphism 11, 14, 57–9, 142, 143, 146, 148, 155, 182, 183
- Hylozoism 24–7, 36, 20, 42
- Ideas 35, 36, 40, 50, 52, 53, 66, 79, 89, 99–101, 118, 119, 121, 123, 133, 134, 135, 151, 152, 158, 167–71, 173, 177, 192–4, 200
- Individual *passim*
- Individualization 57, 60, 72, 140, 150
- Individuation *passim*
- Information 58, 59, 142–51, 155, 184
- Intellect, genesis of the intellect 10, 92–106, 109, 122, 123, 157, 171, 192
- Intelligibility 4–12, 15, 46, 56, 57, 92, 98, 99, 118, 136
- Intensity 29, 61, 111, 175–80, 192, 195, 196
- Interaction, interactionism 6, 56, 64, 68, 69, 83, 147–52, 162, 171, 177, 187
- Law 3, 24, 26, 29, 35–7, 39, 41–3, 46, 49, 54, 70, 103, 117, 119–31, 134, 197
- Life 20–5, 27, 29, 35, 36, 41, 42, 47–9, 51, 52, 58, 76, 80, 87, 97–105, 117, 132, 182, 186, 191, 192
- Machine, natural machine,  
autopoietic machine 20, 34, 44, 49–59, 79, 100, 101, 164, 180–2
- Machinic 182, 183, 186
- Materialism 23, 24, 70, 73, 85, 86, 88, 94, 95, 98, 100, 101, 104–6, 134, 149, 171, 176, 192, 201
- Matter 5–7, 9, 12, 14, 24–7, 29, 31, 33–6, 41, 42, 44–55, 58, 59, 62, 63, 72, 73, 78–81, 87, 94, 103–6, 113, 117, 119–21, 134, 139, 142, 146, 153, 155, 163, 182–4, 190, 193–5
- Mechanism, mechanicism 2, 22–4, 29, 30, 32, 34, 37–42, 44–7, 50, 53–6, 61, 62, 65, 69–74, 77–81, 98, 102, 109, 117–19, 121, 124, 125, 134, 135, 149, 180–3
- Memory 109, 188, 189, 193–6
- Metaphysics 1, 3, 7–12, 20, 21, 62, 63, 65–7, 76, 87, 89, 104, 123, 158, 184, 189, 201

- Method, methodology 3, 29, 30,  
118, 120, 126, 151–6, 169, 182,  
186, 195, 199
- ‘Method of nature’ 100–6, 110, 112,  
114, 119, 122, 126, 132, 133
- Morphogenesis 24, 150, 157, 168
- Multiplicity 58, 89–92, 95–8, 101–6,  
119, 151, 157–76, 179–81, 184,  
197, 200
- Natura communis 8, 127, 128
- Nature, philosophy of nature 19–43,  
54, 55, 74, 83, 88, 116–22, 124,  
181, 192, 197
- Object, objectivity 4, 5, 7–11,  
13, 22, 24–34, 38, 40, 45–7, 49,  
54, 61–3, 66–8, 80, 83, 89–92,  
109, 118, 121, 147, 152, 159,  
163–5, 201
- Ontological difference 10–16, 140,  
154, 185
- Ontology 1–16, 37–40, 61,  
63, 65, 78–84, 88, 92, 93,  
96, 104, 110, 121, 127, 129–31,  
136–42, 149, 157–67,  
175–201
- Organic 1–3, 11, 15, 24, 25, 30,  
34–6, 39, 44–6, 117
- Organic mechanism 73, 74, 78
- Organism 19–37, 40–4
- Organization, self-organization 1–3,  
11, 15, 20–5, 30, 32–6, 38–46
- Plasticity 117, 121, 122
- Praxis 180, 200
- Prehension 63–78
- Preindividual 13–16, 23, 54–5, 60,  
77, 79–82, 87, 91, 93, 96, 103–5,  
130, 131, 136–59, 163, 168–72,  
174, 178, 179, 185, 188, 194,  
199–201  
*see also* Field, Singularity
- Principles 6, 25–7, 29, 30, 32, 34,  
37–40, 47–53, 59, 63, 65, 69, 75,  
80, 82, 90, 115–19, 125, 128, 135,  
146, 149, 153, 162, 170, 173, 174,  
180–3
- Principle of individuation, principium  
individuationis 5–9, 14,  
22, 24, 30, 33, 47, 51–3, 56, 66,  
70, 75, 78, 82, 88–98, 104, 106,  
135, 142, 144, 151, 159–62,  
173–6, 179
- Production 3, 7, 9–16, 25,  
34–7, 40, 41, 47–9, 52, 56–9, 71,  
75, 82, 83, 89, 93, 97–106,  
111, 117, 122, 125, 134, 154–9,  
163, 173, 179–83, 185,  
188–201
- Quasi-cause 173–5
- Quiddity 8
- Relation 68, 115, 125, 128, 131, 132,  
136–56, 158, 162, 167–74, 177–9,  
180–7, 189, 200
- Representation 3, 7, 9–13, 15, 20, 22,  
24–8, 46, 47, 52, 57, 62, 66, 67,  
79, 81, 86, 88–106, 109, 119, 122,  
138, 147, 148, 157–60, 166–8,  
171–4, 177, 185, 187, 190, 193–7,  
199–201
- Res 8, 28, 128
- Revolution 170
- Rhythm 176, 178, 188, 189,  
192, 193
- Singularity, preindividual singularities  
2, 7, 131, 146, 159–61, 168,  
170–4, 177–80, 185–9, 192, 194,  
200
- Species 6, 99, 160, 161, 187
- Static genesis, ideal genesis 167–75,  
178, 195
- Structuralism 165, 167–80, 184–6,  
195, 200
- Subject, subjectivity 179
- Symbol 11, 20–2, 24, 26, 36, 44–6,  
56, 97–101, 120, 136–42
- Teleology 11, 19, 23, 37–41, 58,  
66, 73, 76–8, 86–8, 94–106,  
132–5, 159
- Theology, physico-theology 10, 12,  
25, 32, 83, 98, 155

- Time 28–32, 35, 46, 62, 64, 69, 70,  
90, 110, 117, 154, 187–98
- Totality, wholes 32–6, 139, 166,  
180–7, 196
- Transcendental empiricism 21, 171,  
197, 199
- Transcendental materialism 23, 53,  
55, 80, 81, 188, 195, 196
- Virtual, virtual/actual distinction  
139, 164, 166–80, 182,  
184–96
- Vitalism 22, 23, 47–50, 69,  
73, 74, 103, 118, 149, 171,  
180–3, 192
- Will 88–99