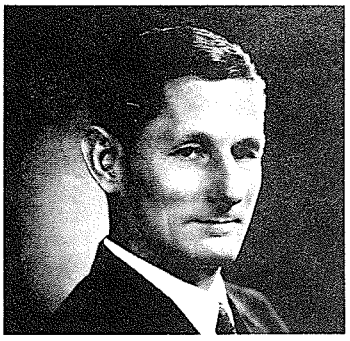
93. Lilly, John C. 1966. "The Need for an Adequate Model of the Human End of the Interspecies Communication Program." IEEE Military Electronics Conference (MIL-E-CON 9), on Communication with Extraterrestrial Intelligence, Wash., DC. 1965. IEEE Spectrum 3, no. 3: P. 159-160



John C. Lilly

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The title that I might choose for my discussion is "The Need for an Adequate Model of the Human End of the Interspecies Communication Program," a plea for self-conscious, open-ended, general-purpose, nonspecies-specific cognition research into models of theory for communication with nonhuman minds. I believe that this is the first time the word "mind" has been mentioned in this respect.

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For approximately the last nine years, I have struggled with the problem of devising working models of the interspecies communication problem at a relatively highly structured cognitive level. Despite overglamorization and excessive public exposure, the embryo has remained viable and hard working.

The major portion of the total problem has been found to be my own species rather than the delphinic ones. There is apparently no currently available adequate theory of the human portion of the communication network. The lack of such a theory has made it difficult for most scientists to see the reality of the problems posed in the interspecies program. As long as the conscious-unconscious basic belief exists of the pre-eminence of the human brain and mind over all other earthside brains and minds, little credence can be obtained for the proposition that a problem of interspecies communication exists at all.

Despite arguments based on the complexity and size of certain nonhuman brains, little if any belief in the project has been instilled in the scientific community at large. Support has been obtained for further examination and demonstration of the large-sized, detailed excellence of structure and description of the large dolphin brain. There is no lack of interest in this area. The falling out comes in obtaining the operating interest of competent working scientists in the evaluation of the performance of these large brains. Interest and commitment of time and self are needed for progress.

The basic assumptions on which we operate are as follows. Each mammalian brain functions as a computer, with properties, programs, and metaprograms partly to be defined and partly to be determined by observation. The human computer contains at least 13 billion active elements and hence is functionally and structurally larger than any artificially built computer of the present era. This human computer has the properties of modern artificial computers of large size, plus additional ones not yet achieved in the nonbiological machines. This human computer has stored program properties, and stored metaprogram properties as well. Among other known properties are self-programming and self-metaprogramming. Programming and metaprogramming language is different for each human, depending upon the developmental, experiential, genetic, educational, accidental, and self-chosen variables, elements, and values. Basically, the verbal forms are those of the native language of the individual, modulated by nonverbal language elements acquired in the same epochs of his development.

Each such computer has scales of self-measuration and self-evaluation. Constant and continuous computations are being done, giving aim and goal distance estimates of external reality performances and internal reality achievements.

Comparison scales are set up between human computers for performance measures of each and of several in concert. Each computer models other computers of importance to itself, beginning immediately *post partum*, with greater or lesser degrees of error.

The phenomenon of computer interlock facilitates model construction and operation. One computer interlocks with one or more other computers above and below the level of awareness any time the communicational distance is sufficiently small to bring the interlock functions above threshold level.

In the complete physical absence of other external computers within the critical interlock distance, the self-directed and other-directed programs can be clearly detected, analyzed, recomputed, and reprogrammed, and new metaprograms initiated by the solitudinous computer itself. In this physical reality (which is an as completely attenuated as possible environment with solitude), maximum intensity, maximum complexity, and maximum speed of reprogramming are achievable by the self.

In the field of scientific research, such a computer can function in many different ways—from the pure, austere thought processes of theory and mathematics to the almost random data absorption of the naturalistic approach with newly found systems, or to the coordinated interlock with other human computers of an engineering effort.

At least two extreme major techniques of data-collection analysis exist for individual scientists: (1) artificially created, controlled-element, invented, devised-system methods; and (2) methods involving the participant-observer, who interacts intimately and experientially with naturally given elements, with nonhuman or human computers as parts of the system.

The former is the current basis of individual physical-chemical research; the latter is one basis for individual, explorative, first-discovery research of organisms having brains larger than those of humans.

Sets of human motivational procedural postulates for the interlock research method on nonhuman beings, with computers as large as and larger than the human computers, are sought. Some of these methods involve the establishment of long periods—perhaps months or years—of human to other organism computer interlock. It is hoped that this interlock will be of a quality and value sufficiently high to permit interspecies communication efforts on both sides on an intense, highly structured level.

In essence, then, this is the problem of communicating with any nonhuman species or being or mind or computer. We do not have, however, the full support in basic beliefs in the scientific community for these postulates. Obviously, we as a species do not believe, for example, that a whale, with a brain six times the size of ours, has a computer worth dealing with. Instead, we kill whales and use them as fertilizer. We also eat them. To be fair to the killer whale, I know of no instance in which a killer whale has eaten a human, but I know of many instances in which humans have eaten killer whales.

Therefore, on an historical basis, I do not feel that at present there is much chance that any species of greater attainments than ours will want to communicate with us. The dolphins want to communicate only with those people who are willing to live with them on the terms the dolphins set up and that certain kinds of human beings set up. Other types the dolphins drive away. Every year we lose people from the dolphin research program. Usually it is because of fear of the power of these animals and fear of damage, even though in the history of the laboratory no one has yet been injured by the dolphins. Sometimes we think that these people who are lost are projecting their own hostilities outward onto the animals in a very unrealistic fashion. The people who survive either realize that this mechanism is operating and conquer it, or else their nature is such that they do not have hostilities to project.