The Bion Hypothesis

For centuries science has been based on a belief that an objective external universe exists and that this universe is composed of particles and space. Modern science extends this view to include two fundamental types of particles, matter particles which make up the material things we detect, and force carrying particles which mediate through their exchange the forces and interactions which occur between the matter particles. All this takes place in a spatial-temporal continuum which includes our everyday sense of space and time.

The application of these assumptions to an investigation of the universe has been enormously successful. It has generated tools and technologies with which we can control and shape our environment, make our lives more comfortable, and do many things which we otherwise could not do.

However, despite the successes which modern science has had in explaining the universe and generating technologies which improve our lives, there are some questions which it has not been able to resolve. These questions come back to our own nature as conscious entities. How do we fit into the universe of science. How was the universe created. What is the nature of consciousness, emotion, compassion, understanding.

With respect to these types of questions science draws a blank. Scientists would either say that such questions are beyond the carefully defined scope of science and hence are unanswerable, or they would refer the question into the realm of religion and say that these questions pertain to the nature of God. In either case the phenomena of creativity and consciousness remain outside the domain of science and consequently are not part of the technologies which derive from science.

This is unfortunate because it often serves to dehumanize our understanding and use of science. The technologies which hold such promise to improve the quality of our lives frequently have just the opposite effect. We destroy complex and beautiful ecosystems to obtain raw materials and produce agricultural products. Then we pollute the environment even further by dumping into it a growing amount and variety of wastes which are produced by these ever expanding technologies.

The bion hypothesis attempts to change all this. It proposes a new scientific paradigm which subsumes all the experimentally verified capability of the existing sciences, but at the same time incorporates other areas of our experience which modern science is foundationally incapable of explaining. It does this by altering one of the basic assumptions upon which the entire scientific paradigm rests.

The bion hypothesis assumes that the fundamental matter particles of the universe are conscious and creative. They are the bions, the units of existence which determine the structure of the universe. The force carrying particles are then viewed as messages which are communicated between bions.

From this perspective the assumption of an independent objective reality or universe becomes irrelevant. The universe is composed of living particles which define its existence, hence there is no objective reality independent of life.

All the other results of modern science are retained. All the natural laws which have been developed through centuries of investigation and experimentation are still viewed as valid. In terms of the bion hypothesis they now can be restated in more general and comprehensive form, which may also extend their range of application, but they still will mean everything they formerly meant in purely scientific experimental terms.

In this way modern science is contained within the bion hypothesis. This is analogous to the way that the predictions of Newtonian mechanics were contained in Einstein's general theory of relativity. All of the prior utility was preserved, but it was expanded into areas where the old paradigm did not apply.

The implications which this will have on science and philosophy will take decades to evaluate and resolve. Philosophy and foundational research are long term projects which can't be rushed, but it is not our intention to only focus on such basic research. Fortunately, there are many areas where the insight provided by the bion hypothesis can be immediately applied. In these areas we intend to implement a range of new bion technologies which will be able to provide more economical and efficient solutions to many existing problems. These new technologies will also be able to generate fundamentally different alternatives for other problems for which there are no current solutions.

For example, the assumption that the universe external to ourselves is creative allows us to formulate a new type of design principle for solving practical problems. This principle will be to incorporate the creativity of the external reality in the problem solving process. If we can recognize and formulate a problem, we can utilize the creativity of the external environment to help solve this problem. What needs to be done is to manage the presentation of the problem to the environment and to define to some degree what will constitute an acceptable solution.

This situation is analogous to the management processes which we use in our human organizational structures. Governments, corporations, societies, even families and marriages, all survive through the appropriate management of our own creative

abilities. Even though we often do not fully understand how we actually do this we still recognize that the creation of new alternatives is frequently the only way to effectively manage a paradoxical or non resolvable situation. What we now must do is to extend this understanding into other areas of our lives. Instead of just managing our own, or each others, creativity we must also learn how to manage the environment's creative abilities. This will lead to a whole new view and concept of technology.

The area we have picked for an initial application of this approach is one in which the failure of existing technology is most notable, the field of environmental pollution. Most of the products and processes which we use and employ have not been designed with environmental compatibility in mind. Consequently they have been steadily and cumulatively destroying the quality of our own ecosystem. Now, when we are faced with a growing environmental crisis, we find that either existing technology cannot solve the problems we have created, or that the possible solutions are so expensive as to be impossible to afford.

It is here that the bion hypothesis suggests a startling alternative to conventional solutions. Instead of trying to force a specific degradation, transformation or physical containment of the waste materials, we will synergistically utilize the creative abilities of biological systems to eliminate the waste materials. This is not to suggest that we set up specific fermentations or try to genetically engineer specific organisms to degrade specific wastes. Rather the principle is to expose a complex mixed biomass to a waste matrix under a variety of changing but interrelated environmental conditions. Under proper management the biomass will then change so as to optimally bioconvert the waste matrix into other ecologically neutral or desirable materials. The resulting bioconversion system can even be applied to highly dispersed waste materials existing in soils or in low concentrations in water or air.

The bion hypothesis has already yielded several specific applications of this new worldview. A unique bioconversion system for handling extremely high carbohydrate food wastes has been developed and successfully tested. An economical and more efficient modification to biological phosphorus removal in wastewater has been patented. An innovative biomonitoring program for the verification of non toxic effluents has been implemented in a large wastewater treatment plant. An applied philosophy for the operation of biological wastewater plants has been performing for years with spectacular results.

Even though these are only a tiny fraction of the potential applications of the bion hypothesis they argue persuasively for its utility and validity. Future applications are expected to transform the way we currently deal with all types of biological systems. The world of tomorrow will be run by technologies which are inherently ecological, sensitive to our aesthetic, emotional, and conscious spirit. They will deal with our

environment as a synergistic extension of ourselves, not as a receptacle for offensive and hazardous wastes.

First Printing July 1989

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In September, 1989, shortly after the completion of The Bion Hypothesis, Jon and Jere Northrop founded Bion Technologies.