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A STRATEGY OF INQUIRY

+see 3, and also 20

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Comments made at the dedication of the Laboratory of Brain Evolution  
and Behavior.

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Recently a visitor to this Section asked whether we utilized inductive or deductive logic in our research. My reply was: "Neither; rather we approach our problems poetically." By "poetic" I mean most nearly what Thomas Kuhn means by the term "revolutionary science"; or is implied by the word "serendipity" coined by Horace Walpole. Neither of these descriptors of the process culminating in new conceptualizations have been amenable to precise definition. Rather the tactic is to describe some set of circumstances out of which new insights evolve, and to end with the comment: "You now see what I mean!" I too must follow this tactic, and feel no self-deprecation from admitting to not fully understanding the origin of the creative act.

For my comments to carry any weight one must start with the assumption that creative insights have followed from our strategy of inquiry. As examples of presumed creative concepts arising from our strategy we may take those implied by: the behavioral sink, social velocity, optimum group size, conceptual space and ideomass. These are representative of about 50 major concepts we have generated. At the outset, it must be admitted, that none of these have been adequately validated or explored through normal science procedures by either us or other investigators. Instead, as we gain assurance that a new concept is likely to represent some aspect of reality, we utilize it in following inquiries as a leverage to pry open visions about other relationships. This procedural policy, however, forms only one of the essential elements of our strategy.

A second facet involves the commitment to pursue simultaneously a wide variety of complex and divergent lines of inquiry. These recently have included those focusing on communities of small mammals in nature, designing physical environments, experimental populations, rhythms and sequence of behavior, emotionality, group size, social organization, vitamin A and tryptophan in the diet, concept analysis, and biological and cultural evolution.

There is method in our "madness" in spreading our energies so widely. Each new study area initiated must encompass at least three major concepts. Two of these must coincide with two of the three or more concepts explored in a prior study. In this way seek to evolve a conceptual network permitting an interaction among successively explored concepts.

In general we avoid simplistic experiments, but instead elaborate a situation where an individual or any larger aggregate can be viewed as a complex system having numerous modalities of response in relation to an equally large number of kinds of stimulus input or environmental opportunities for responding. As a part of this tactic in our strategy we hold a relatively low opinion of our own capacities, or anyone else's, to foresee the consequences of a biological or social system continuing to function over prolonged time subject to some presumed set of independent variables. We essentially say: "If a system persists in a structured setting or is subjected to some set of forces for a long time, patterned information will accrue from systematic observation." Sufficiently astute analytical and synthetic detective work will then reveal basic principles operative.

Three final conditions must persist <sup>for</sup> such a strategy of inquiry to prove fruitful:

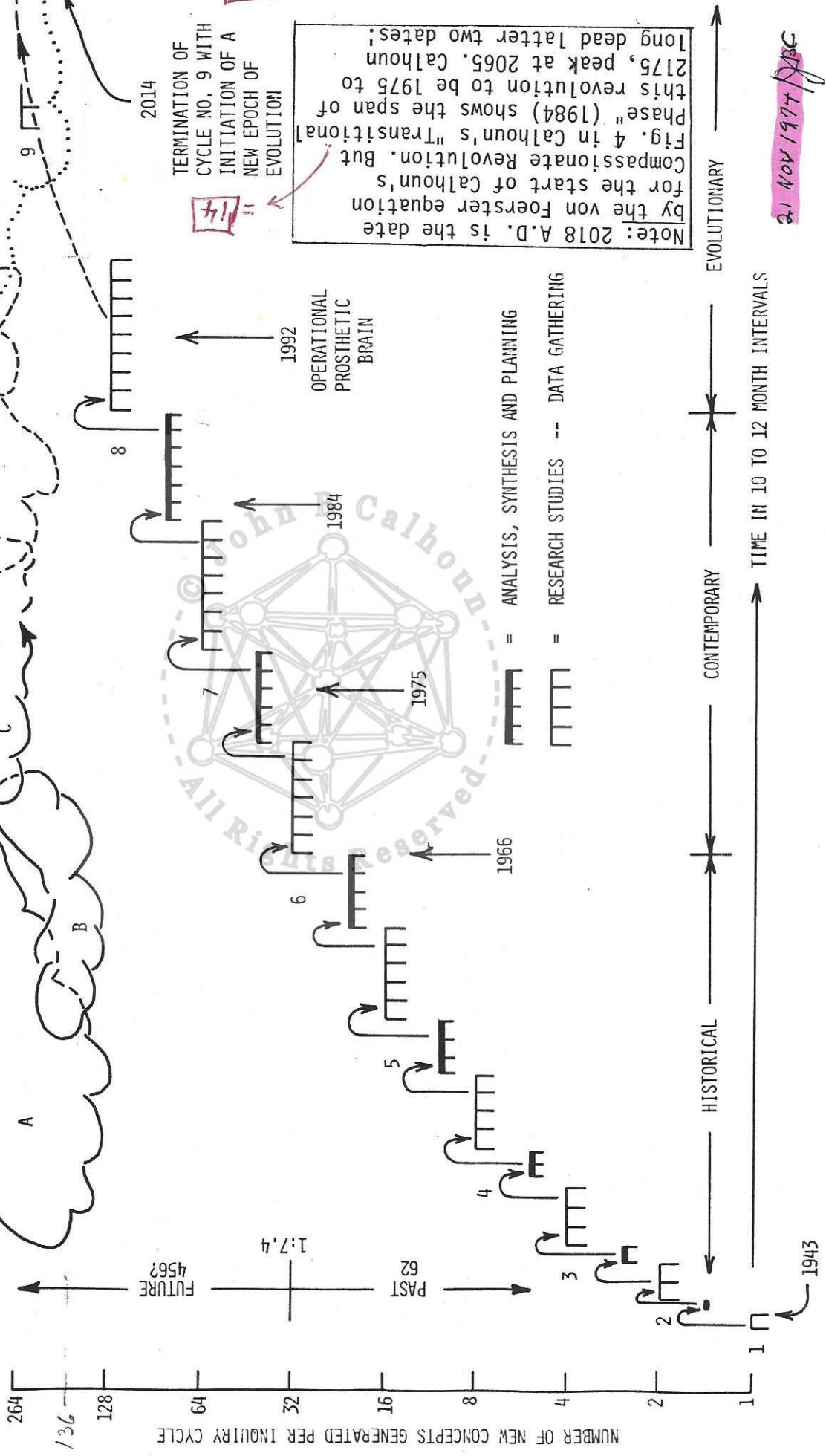
1. There must be a competent and devoted staff capable of tolerating the ambiguities and the disruption of effort inherent in such a strategy.
2. There must be facilities for recording, processing, and interrelating a large mass of information, a sifting through for essential nuggets.
3. The source of financial support must be a "patron" having sufficient faith in the utility of your strategy to assure the long term continuation of it essential for insight production.

All of these conditions have been relatively well met here within the NIMH setting for the past 15 years, and we look forward to an even more profitable time during the next 15 years as the interest accrued from our past efforts makes development of insights easier.

CALHOUN'S

SALTATION STRATEGY IN POPULATION TO "BRAIN" INQUIRY

see also 20



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