CYBERNETICS & HUMAN KNOWING

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Rodney E. Donaldson:
Cybernetics & Human Knowing: one possible prolegomenon[1]

Why Cybernetics & Human Knowing?

Starting from its initial insights in the 1940s into the nature of "feedback" and "circular causal systems" (which by virtue of their circularity exhibit properties remarkably different from those possible in the realm of linear cause and effect), cybernetics has continued to unfold its seminal ideas and apply them to itself as a domain of understanding - with the result that it has become (at least for me) the science and art of the understanding of understanding.[2] Indeed, my mentor, Gregory Bateson, called cybernetics "the biggest bite out of the fruit of the Tree of Knowledge that mankind has taken in the last 2000 years".[3]

But what does that mean?

We have only to look around us (and inside our souls) to see that something is wrong with the path that most of late twentieth century Western culture seems to be taking. Unaware that "the organism which destroys its environment destroys itself",[4] we are triggering potentially irreversible changes in the ecological system of which we are a part. We also have a habit of seeing "problems", attempting to "fix" them, and then finding that, in a longer time frame and in a wider spatial context, our very "solu-tions" as often as not make things worse. Finally, we also do not suspect that our very perception of "how things are" is grounded in habits of thinking - which may be outmoded, and possibly lethal. Indeed, we are mostly unaware that we have - or are - **an** epistemology . (And as Gregory Bateson once wryly observed, "You can-not claim to have no epistemology. Those who so claim have nothing but a bad epistemology.")[5]

What is epistemology? Human knowing (as well as that knowing which is characteristic of all living systems).

In a sense, there is nothing new in all this. Aspects of Humberto Maturana's brilliant analysis of the difference between transcendental and constitutive ontologies[6] have been intuited by many wise women and men in past millennia and in a variety of cultures - but not by very many, and not with the clarity and scientific sophistication which Maturana's cybernetics offers.

Heinz von Foerster, the father of the idea of second-order cybernetics, refers to it as "[a] turn from looking at things out there to looking at looking itself".[7] And of course the two moments of this turn are inseparable:

you can-not have explicits without implicits, and vice versa. (Notice that we can resolve the seeming dualism between "sub-ject" and "object" by substituting the words "implicit" and "explicit").

To take seriously that everything said - **every-thing said** - is said by an observer (an epistemology) to another observer (again an epistemology), is to revolutionize human experience. It is to hear every assertion not as a "fact" or a "truth" but as an **invitation to orient** in a particular manner - and no more. It is also to see that habits of orienting depend upon (inter-)personal **history** (based, of course, on our initial biological structure) - and no more.

This realization - once real-ized and operationalized - invites us to something we often wish to avoid but find much harder to avoid once we understand second-order cybernetics: namely, human responsibility.

For one thing, we find ourselves invited to a whole new understanding of the so-called "mind/body problem". Mind/body unity or dualism becomes a question not only of so-called "fact" but also of ethics - of integrity, of integration, of being whole.

These understandings also bring into question some of the early metaphors of cybernetics itself. Once we grasp that, as Maturana phrases it, "there are no instructive interactions"[8] (that -for example, in the case of human knowing - we are not built such that some externality called "information" can enter us without some operation on our part which in fact constitutes "information" as "information") - once we recognize that perception is an activity and not a passivity[9] - the notions of "communication" and "control", as well as "information", either require redefinition or become quite obsolete; and we see that our responsibility for our understandings is total. But we are not talking solipsism, for language is constituted in our **interactions** (specifically, in our consensual coordinations of consensual coordinations of actions), not in our brains.

We also learn that the past and future are stories we tell ourselves in the present - again, inviting us in the direction of responsibility.

Our very notions of "change" change. Paradoxically, we find that we change, not by trying to be some image of self different from who we are, but precisely by accepting who we are - and then finding ourselves changed by virtue of having undergone that acceptance.

Above all, we learn that "responsibility" and "ethics" are not bludgeons with which to beat others about the head: they are matters between oneself and oneself. As Heinz von Foerster points out, it is the difference between "Thou shalt" and "I shall".[10] But even the "shall" drops out, because ethics is not a matter of prescription but of taking responsibility for one's actions. Thus, ultimately, we find that responsibility has to do with **reembodying** ourselves - existentially healing the mind/-body split in which we have lived for so long. Why? Because responsibility turns out to be about **emotioning**, about our bodyhoods - specifically, our awareness of our liking or disliking of the consequences of our actions. And the experience of freedom is found to consist in our awareness of our responsibility, i.e. in our awareness of our awareness of our liking or disliking of the consequences of our actions.

In short, if we wish to be free, we must be responsible - or at least such is my understanding of the implications of Maturana's cybernetics[11] (from which I have borrowed extensively in these remarks).

To say it all slightly differently, we have the opportunity to emerge from what Arthur Koestler[12] called "the Cartesian catastrophe" (i.e. "the identification of 'mind' with conscious thinking") - into a lived awareness

that, in the final analysis, caring and clarity, far from being opposites, require each other in order to be genuinely that which each aspires to be.

In short, we can become whole - simultaneously integrating mind and body as well as humanity and biosphere.

Again nothing new - but something of considerable importance to the fullness of our living, to the quality of our relationships, and perhaps to the survival of our biosphere.

So - why **Cybernetics & Human Knowing?**

Because it promotes the adventure of being **alive** in our time.

In this connection, it is noteworthy that Herbert Brun defines cybernetics as "the ability to cure all temporary truth of eternal triteness".

The American Society for Cybernetics is proud to support this journal of genuine cybernetic co-exploration into matters that concern all of us. I applaud Søren Brier's efforts and voice the fervent hope that **Cybernetics & Human Knowing** will become an unparalleled advocate for nontrivial exploration of a kind desperately needed in the current age, fearlessly embodying that combination of rigor and imagination which Gregory Bateson loved and lived, and which may well be balm for us all.

Notes:

1. 1.I wish to make it clear that cybernetics - as befits a science and an art which is vitally alive - consists of a wide variety of theoretical positions, of which my own is only one. My particular understandings owe much to Gregory Bateson, Heinz von Foerster, and Humberto R. Maturana.
2. This phrasing draws from both Heinz von Foerster and Humberto Maturana.
3. **Steps to an Ecology of Mind** (New York: Ballantine, 1972), 476.
4. Ibid., 483.
5. **A Sacred Unity: Further Steps to an Ecology of Mind**, edited by Rodney E. Donaldson (San Francisco: HarperCollins, 1991), 178.
6. "Reality: The Search for Objectivity, or the Quest for a Compelling Argument", **Irish Journal of Psychology** 9 (1988): 25-82.
7. "Ethics and Second-Order Cybernetics" in Cybernetics & Human Knowing vol. 1, no. 1.
8. "Ontology of Observing: The Biological Foundations of Self Consciousness and of the Physical Domain of Existence", in **Conference Workbook for "Texts in Cybernetics Theory": An In-Depth Exploration of the Thought of Humberto R. Maturana, William T. Powers, and Ernst von Glasers-feld**, edited by Rodney E. Donaldson, Conference Chair (American Society for Cybernetics, 1988), 14.
9. Cf. Bateson's "The rules of the universe that we think we know are deep buried in our processes of perception". **Mind and Nature: A Necessary Unity** (New York: Dutton, 1979), 35.
10. "Ethics and Second-Order Cybernetics" (op.cit. note 7).
11. See Maturana's "Reality" (op. cit. note 6), as well as Cynthia Weeks and Rodney E. Donaldson, "Embodied Experiencing: Emotion and the Experience of Freedom" (forthcoming).
12. "Introduction", in L.L. Whyte, **The Unconscious Before Freud** (London: Julian Fried-mann, 1979).

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