

Anticipation as an Attractor

Mihai Nadin. Paper presented in the framework of the session “Anticipating the Future” at Uplift Academy Workshop, Encinitas, CA. By invitation only seminar on the Good Ancestor Principle, February 4-5, 2007

Notes from an optimist interested in what we have to do, not what we want to celebrate
The past has never been more irrelevant to the present—never mind the many possible futures—than today. If this startling assertion does not irk you enough, here is the corollary: The past will become even more irrelevant as humankind advances towards a pragmatic framework of a fundamentally new condition: from continuity and the expectation of permanence (embodied in what we do) to discontinuity and the never-ending excitement of transience (expressed in ways of doing things no longer related to the past). As humankind reaches the highest scale of integration and interaction—usually identified as global economy—this dynamics is an expression of necessity, not of choice. In our days, the preservation of the species entails a productive impetus that results in the highest efficiency—output compared with what it takes to obtain it—ever achieved. At this final scale, at which the nation-state and the associated functions of societal organization become obsolete (whether in the form of welfare programs, permanent treaties, or the UN Charter), humankind faces new challenges. Extreme individual self-determination is associated with the consequences of procreation and nurturing under circumstances resulting from the effective dissolution of family as we know it. In the so-called modern societies (imitated by those not yet reaching their level of prosperity), preservation pressure increased to levels never experienced in the past. They already “import” the young and the capable from poor countries, because otherwise the pyramid game would break down under the heavy burden of benefits promised opportunistically without any understanding of the demographic equation.

Paradoxically, the more successful the Western world continues to be in terms of facilitating access to prosperity, the deeper the disconnect between the individuals who make it up and their sense of belonging to a whole that transcends their individual drives (including that of power). The data available¹ informs our understanding of the process: Pretty soon, given the technologically determined rate of productivity increase, 20% of the world population will be able to cover the needs, and in many cases the expectations, of the remaining 80%. Survival is guaranteed, even for the poorest countries on the face of the earth; and even access to relative indulgence is on the horizon: under miserable living conditions, television dominates the life of illiterates and unproductive men and women living at the mercy of various kinds of charities. All the while, coherence is rapidly decreasing. The sense of future, as a defining moment in the awareness of individuals involved in communities, melts into the immediateness of existence—in New York or Paris or Berlin or London as much as in the slums of Rio de Janeiro, Lagos, or in the refugee camps all over the African and Asian continents. More and more, the world is made up of egotistic entities able to function despite the lack of a community of shared interests and responsibilities. Fanaticism, religious or social or political, is only an expression of this egotism in action. Religion as well as science—both subject to faster cycles of renewal—morality, the law, the arts, and education succumb to the same pressure of ME and NOW that are replacing US and FUTURE.

Humankind is in the process of transferring to all kinds of machines (i.e., programs, for all practical purposes), which tick according to their own rhythms (and not that of human existence), the vast majority of activities that in the past involved direct forms of work and human interactions. New activities are essentially human-less. In the name of concern for the human being—in areas of health, access to education, social services, for example—human beings can no longer afford to pay for human performance. Automation, which looks like the result of scientific and technological passion for more knowledge, is actually the expression of a necessity grounded in competitive pressure: the cheapest replacement of the human being, which is subject to ever longer cycles of expensive maintenance. The process is still only at the beginning—we have already become our own secretaries and telephone operators, thanks to labor-saving technology that promises to make us more productive, and thus more competitive. But to ignore it, or to present it, as the industry does, as a beautiful accomplishment means to miss the chance of understanding, of becoming engaged, in the process of change, instead of being only subject to it. Better communication is a grandiose self-delusion in which we indulge, still in awe of accessing everything there is, including things we never needed, and which will be obsolete even before we realize their potential. Become a “player” in the MMOG (massively multi-online games) that are becoming the medium of choice for conducting real or future battles, healing disease, advancing political agendas, and educating through entertainment (“edutainment”). Have you ever used a Newton™? As was the case for the Xbox™, PlayStation™ and Wii™, there is already a futures market in which the iPhone™ (who owns the name, by the way?) is traded well over its price. Sign a “nuptial agreement” for 2 years and wait 6 months. No marriage today takes place under more protective circumstances; if it did, we would not have the rate of divorce we have today (and more singles than married couples, which would translate, I guess, into more non-users than users of cellular telephony).

It was, nevertheless, through practical creative experiences (from work to making art and enjoying) that throughout history the human being realized what space and time are. Creativity is anticipatory. According to our biophysical condition, we humans constituted the sense of future as a contract among generations, not as a reaction-guided understanding of time. And it is through the new condition of practical experiences, entrusted upon artifacts that mimic and replace the human being, that this defining matrix ceases to be formative of our sense of distance and future, and thus of our responsibility as ancestors.

While this is happening, it is not only needs, corresponding to the preservation of the individual, that are met. Ever higher expectations, by far transcending needs, are adopted in civil society as an expression of human progress, as it panders to opportunistic tendencies. The right to affluence and deviation, in various forms, often defines the difference between those, still few, who have and impose their sense of righteousness, and those who, as a majority, or as protected minorities, expect help and affirm their right to choose. In this respect, it is justified to address the anticipatory model of Uplift—being pulled by expectations of a better future, rather than being driven exclusively by the problem-solving model—provided that its terms are well defined. But to give meaning to this well-intended model, we need to address anticipation with maximum rigor. Robert Rosen is well known for attempting such a level of rigor; my own modest work could not be justified independent of expectations of rigor. The construct we call anticipation makes sense only if related to the broader perspective of science. Deterministic reductionism, expressed in the machine model, and to the non-deterministic understanding of complexity, as

the underlying factor of change, need to be understood in their unity, not as reciprocally exclusive.

Anticipation within a relatively unchanging reality—the reality of human interactions in previous pragmatic frameworks—is a matter of the individual’s performance in a context of interaction and cooperation. To deviate once entailed risk not only to individuals, but also to the community they interacted with. In our new context, of extreme competitive nature, anticipation still underlies individual performance (think of the new role of “stars”—from champion athletes to actors to politicians to star scientists), but it becomes critical as it pertains to society at large. It is at this scale that we face these consequences

- changes in the environment;
- extreme events corresponding to the dynamics of nature (such as earthquakes, tidal waves, floods) and of human beings (terrorist attacks, or failed large-scale projects carried out because we can, not because we should, that is, due to a missing sense of time and thus of consequences—the Aswan Dam and the dikes in New Orleans are examples);
- the breakdown of family, community, society;
- the failure of a model of democracy focused on leveling and on equal access to mediocrity;
- the end of politics, supplanted by the economic model of competing interests of public entities calling themselves “parties” while in reality representing the selfish interests of their own members;
- the aging of humankind and all the consequences, well beyond what we want to concede, that this entails.

For all practical purposes, Dr. Jonas Salk’s question, “Are we being good ancestors?” is rhetorical at best, while historically it is of extreme significance, since it pertains to our past. As we get closer to the next historic bifurcation (the last was described by Norbert Wiener as the “new industrial revolution”²), the stability of the global system is challenged by many perturbations. Our almost exclusive choice—and I don’t mean to negate the role of free choice within a dynamics of change determined by global forces—is to understand the forces at work, and to act in ways that do not result in additional disturbance—and in our self-destruction. The equation of population change is close to a provisional balance; after that, even without taking into consideration the very prolific Muslim population, or the consequences of the AIDS epidemics, the numbers look rather ominous.

Anticipation as an attractor corresponds to a dynamic systems perspective. It is the necessary value towards which it tends. Each bifurcation brings it closer to the “strange attractor” that seems to affect the entire process. Before the dynamic system of human existence on this planet is reset—as dynamic systems get reset once the bifurcations get closer and closer and eventually hit the chaos wall—we have to make the effort to understand that behind faster cycles of change (and innovation), behind the new science of the circumstantial, behind the adverse reaction to religion and alternative descriptions of the world as we experience it, there is the reality of a species that, in its meliorist euphoria, has reached another form of decadence, if not degeneration. The aging of population in the Western world is a phenomenon impossible to ignore when addressing the future.

Heinz von Foerster, whose visionary work (think about his Biological Computer Laboratory in 1957 at the University of Illinois) influenced many scientists—I know that Rosen was quite impressed by it—answered the question we shall debate with an ethical imperative: “Always act as to increase the number of choices.” Since for me anticipation is a realization from the present to the future, represented by the space of possibilities, I would reformulate the ethical imperative as: Recognize, acknowledge, and multiply the space of possibilities; those who come after us will make choices different from ours—including the choice of finding us, as past, irrelevant. We will never find out if they considered us good ancestors. But they might be touched by the thought that at least we asked the question.

References

1. William J. Baumol and Alan S. Binder, *Economic Principles and Policy*, 2004, p. 492;

Amitava Mukerjee, *Hunger. Theory, Perspectives and Reality*, 2004; *Key Indicators of Labour*, International Labor Organization, 2006.

2. *The Human Use of Human Beings*: “The industrial revolution is a two-edged sword. It may be used for the benefit of humanity, but only if humanity survives long enough to enter a period in which such benefit is possible. It may also be used to destroy humanity; and it can go very far in that direction.”