
GUEST EDITORIAL

Still not paradigmatic

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Abstract

Purpose – A personal introduction to the Gregory Bateson memorial issue.

Design/methodology/approach – Outlines Bateson’s work and the content of the memorial.

Findings – Connects Bateson’s legacy with the work of current authors and the general problems the world faces today.

Originality/value – Describes the necessity to use ecological principles as presented by Bateson.

Keywords Epistemology, Patterns, Contexts, Cybernetics, Complexity theory, Sciences, Arts

Paper type Viewpoint

Gregory Bateson’s contributions to epistemology are so numerous that it is impossible to even show their main implications in this memorial. In order to describe Bateson’s legacy appropriately, it would be necessary to present the whole upheaval of Western epistemology in the twentieth century – beginning with Russell’s letter to Frege written on 16 June 1902, which induced a radical change in our understanding not seen since the time of the ancient Greek philosophers. Furthermore, everyone acquainted with Bateson’s work will regard other aspects as important and essential. Therefore, I will take the opportunity to present my very personal view on Bateson.

For me, it is one of the milestones of Western science (a singular moment comparable to Archimedes’ famous bath) when Bateson went to the zoo and asked himself how monkeys who play fighting know that they play and do not fight (Bateson, 1972, pp. 177-93). His discovery of a context, of a meta-information qualifying the content (the formal “information”) led to the formulation of a complex communication theory. The idea of “double bind” (see Nardone and Portelli) was only one – although a prominent – concept emerging from these investigations. More important, however, was that it became possible to think about topics such as psychiatric diseases, communication, information, mind and others from a totally different point of view.

With Bateson started a better understanding of semantics (theory of interpreted relations and structures). Until then, science was mainly concerned with syntax (theory of uninterpreted signs), except for the long forgotten Peirce. Gotthard Günther who later developed a rather strict method to formalize what he then called polycontextuality showed that on the level of a two-valued, linear logic – the syntax (following the “tertium non datur” saying that something is or is not, and a third is not allowed) – there is only truth without environment and without meaning. As soon as contexts become involved there is meaning but no truth anymore (Günther, 1976, pp. 217-19).

This interplay of truth and meaning in changing contexts is crucial for a sound epistemology of complex processes. And here, I see Bateson’s main contribution to scientific thinking. He tackled this problem from many different angles. The technique of double description is only one tool to achieve this (more in Kenny and Scarino).

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But such rather simple techniques are still disturbing as they leave the linear track of reasoning. This is even more true for Bateson's first major contribution to scientific thinking, his concept of "schismogenesis" presented in 1935. Schismogenesis refers to an interactional pattern, a positive feedback mechanism, leading to discord and strife. The "symmetrical schismogenesis" where two parties get each other going using the same tools – like in the film "The War of the Roses" (on an individual level) or in an arms race (on a political level) – is easily understood. But the opposite, the "reciprocal schismogenesis" where one party does ever less whereas the other does ever more – like in the film "Dogville" – is still puzzling, although it is the same kind of cybernetic reaction. Describing alcoholism or violence in the family in such terms usually provokes arguments like that it is not tenable to make a victim responsible for his/her own harm. But this often heard argument misses something central. The point is not to ask who caused a situation as this question is too often related to the notion of guilt and punishment. The question is about patterns. If there is a responsibility it is the responsibility to understand patterns. Only then the attempt to change a situation might really contribute to a solution. Causal "solutions" are too often part of the problem. This is as true in family violence, climate change or health politics.

Bateson (1972, pp. 440-7) subsumed the usual linear approach under the notion "conscious purpose". Already in 1968, he presented a cybernetic model showing how linear interventions might induce unexpected and uncontrollable results. But the importance of this model has never been sufficiently acknowledged, neither in the Wartenstein Conference 1968 (Bateson, 1991) for which the paper was written nor in the following years. But the understanding of such patterns (and not of "causes") is probably the most crucial point in facing the enormous problems our world has today. (In this issue, Rudolph and Ivanovas *et al.* apply this concept).

Another rather simple epistemological tool Bateson adopted from Korzybski was the picture of "map and territory" (see also Holl). Bateson stressed again and again that our concepts are something different from what is happening and confusing the two would be like eating the written menu in a restaurant (with all the fine meals written on) instead of waiting for the real menu. Although this sounds funny and obvious, it is not. This shall be exemplified with a simple example from my field of research: a diagnosis is a description of a certain human condition, mostly in terms of pathophysiological alterations (which makes a lot of sense under certain conditions, but loses any relevance in other contexts). However, as soon as physicians start to treat a disease they have already eaten the written menu. This confusion about the reality of our concepts has major (mostly negative) impacts for any kind of research.

This was my background when Monika Broecker asked me to share with her the honour to be guest editors for this memorial. It was an interesting task for us to have a look at how Bateson's epistemology is understood and applied today. The result was rather surprising. It seems that Bateson's ecological concepts have not really become paradigmatic. That is, scientists still focus on assimilating the systemic concepts, developing fields where an ecological approach could be applied, and how. But hardly anyone really applies such concepts. This is quite obvious in biological research where the major journals talk ever more about the systemic approach. But the applied logic is still linear. A typical example was an article in *Science* magazine which explained recursivity with the *Babutschka*, the Russian puppet in a puppet in a puppet (Premack, 2004). But the *Babutschka* is linear, no recursion is involved.

Even in psychotherapy, where Bateson had a major influence during his life time his concepts and ecological thinking seems to lose influence as Thomas *et al.* demonstrate.

One explanation for this could be this strange specialization, which is currently regarded as scientific. There are epistemologists well able to handle a sound methodology. But they are not acquainted with special scientific topics. On the other side, there are many scientists, knowing a lot on their subject, but still work with a kind of felt epistemology without taking the discoveries of the last 100 years into account.

Our intention as editors was to demonstrate the whole range of possibilities how to use Bateson's concepts. That is, we tried to provide a kind of multiple description of how ecological thinking might be used, from rather linear approaches to sophisticated techniques of complexity. As Bateson himself was a master in sophisticated thinking, we decided to include some unpublished material by him. We start with a short reflection on adaptation including a hot topic of our days, the issue of intelligent design. Bateson points to the fact that unless we have a broader view all reasoning will remain rudimentary. Then Ray presents some unpublished texts of Weakland and Bateson focusing mainly on psychotherapy and anthropology, the fields where Bateson had his main influence, but also reflecting ecology in general.

Keeney shows in a field study on bushmen that theory and practice, psychology and anthropology go hand in hand, are interwoven. This is followed by two texts on Bateson's anthropological book "Naven" (Krause, Guddemi). It is a kind of double description where the authors develop their thoughts in a totally different direction. Nardone *et al.* review the concept of double bind, and Madonna proposes ways to use Bateson's ideas for further developments. Scientist with a more practical purpose are Bilson and Thorpe who try to use Batesonian principles to change social work on an institutional level. Rudolph has a similar aim but on a smaller scale. He used texts of Bateson to induce a more complex thinking in his students of social working in order to cope better with problems of violence and deviant behaviour.

Fedotov, the translator of Bateson's works into Russian, presents a kind of field study showing the practical difficulties he encountered. Russia is also the main topic of the article by Luksha and Tkachev. In using Bateson's epistemology, especially the concepts of value hierarchies and learning of higher order, they study the transition of Russians economy. The learning concept is also central in the following articles. Ivanovas *et al.* investigate the influence of "conscious purpose" in medicine, maintaining that a linear approach might do more harm than good when the wrong things are "learned". Very closely related is an article by Bateson linking addiction, adaptation and learning. The conclusions of these thoughts have been already published in chapter XII of *Angels Fear* (Bateson and Bateson, 1988). But for us it was important to show the wider structure of his thinking process. Von Goldammer and Paul then connect the learning of higher order to Günther's polycontextuality. With this article starts a series of more theoretical contributions, focusing on a deeper understanding of Bateson's legacy in the epistemological context. Montagini recalls the Macy conferences and the impacts (and the lack of impacts) they had. Lutterer compares Bateson's communication theory with Watzlawick's. Ray and Governor present a discussion of Bateson, Haley, Weakland and Jackson about learning, communication and the related philosophical background. Fischer elaborates more on this philosophical background, whereas Holl reviews the concept of map and territory in detail. Kineman and Kumar then take a more general view. They compare Bateson's

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concepts about relationships with those of Rosen who also worked on relational thinking, although more formally. But the authors also forge links between these Western concepts and the philosophy of the Vedas which Bateson explored in the 1970s.

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The question how things are related to each other, the “connecting pattern” was central in Bateson’s work. This is also the topic of the article of Volk *et al.* who look for patterns on a larger scale what they call “metapatterns”. Normal science has enormous problems with such concepts as the current scientific method is mainly based on comparable measurement. But, as Bateson regularly stressed, quantity never creates pattern. That is, a totally different approach is necessary to conceptualize patterns. Despite this scientific problem, the ability to perceive and understand patterns is a basic human ability. For example, even without previous knowledge test persons are, to some degree, able to predict how a chaotic sequence continues, something that is impossible if the sequence is random (Novak, 2002). That is, there is always a discrepancy between the ability to perceive and react to patterns and to formulate them.

It has always been the domain of artists to explore this field of perceived but not formulated patterns. And artists often tackle hot issues of the social and scientific development much earlier than scientists do. For the systemic world M.C.Escher is most famous. But van Gogh painted perfect turbulences (Aragón *et al.*, 2006) and Jackson Pollock created fractals (Taylor *et al.*, 1999), just to make a few examples. Another example is the work of Grossmann. When I first saw his “Discussions in a pub” I thought, as probably many of you: “Again such a piece of senseless modern art!” But in many discussions on the problem of modelling living processes I referred to Grossmann’s works. The difficulty to depict living processes became a kind of deadlock in genome and brain research. There are no cyclic arrows in physiology and pathways do not “exist”. They do not follow the logic of the *tertium non datur*. How are we able to depict processes like immune response or discussions in a pub appropriately? Michel Butor’s “Modification” or “James Joyce” “Ulysses” and even more his “Finegan’s Wake” have been nothing else than attempts to map what might be called mental processes. But how can we map such attempts? It is not the duty of artists to provide solutions to such questions. They just have to play with the problem.

May be it is not accidental that artists use Bateson’s concepts much more pragmatically – just as Klien does it for choreography and dance – than scientists do. However, many scientists use also art in order to develop a deeper understanding of the patterns they are concerned with. This is why we wanted to include a certain amount of “experimental epistemology” with a more artistic approach. Todesco, for example, elaborates on the term of information by the help of Bateson’s dog. For sure, many of you will not agree with his statements. This is why we included a reply by Fedotov with which many of you will not agree either. Again, the aim is not to state how things “really” are, but to sharpen our scientific tools and to improve our understanding of patterns through multiple descriptions. Then Kenny and Scarino play with Bateson’s dialogical structure of metalogues and Pawlik creates a kind of inner metalogue combining the legacy of Bateson and von Foerster. Knoop describes literature as a communication between an author and a reader. Finally, Nachmanovitch gives a more detailed analysis of the relation between art, science, and Bateson’s work.

The memorial ends with a more journalistic article by Feller on Gaviotas, a cooperative in Columbia, which works according to ecological principles, far away

from any scientific approach, demonstrating that there is no need of science to think ecologically and Nora Bateson reminds us that the important thing is how we think not what we think.

As stated before, many topics of Bateson's legacy are not included in our selection. One important is the notion of the "sacred". This can be best looked up in *Angels Fear* (Bateson and Bateson, 1988) or in texts available on the internet (Kenny, 1998). Another topic is the so-called semiotic approach, which has been presented somewhere else (*Cybernetics & Human Knowing*, 2005). Another, mostly forgotten contribution of Bateson (1974) is the edition of the book *Perceval's Narrative*, the autobiographical account of a psychotic episode. This description gives so many insights into the nature of perception, brain function and psychotic developments that it exceeds by far what we learn from scientific literature.

Finally, we would like to thank everybody who helped us to create this memorial including all the authors, peer reviewers and especially Mary Catherine Bateson who supported our work wherever she could and also provided us with photos of Gregory Bateson. Many thanks also to Barry Schwartz who selected and enhanced these photos and allowed us to publish some of his.

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