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Some Remarks to the »Author Meets Critic Session« at the DGS Congress in 2004

John R. Urry, Sven Kesselring, Matthias Junge and Hermann Schwengel

»›Complexity theory‹ seems to provide some metaphors, concepts and theories essential for examining the intractable disorderliness of the contemporary world. Relations across that world are complex, rich and non-linear, involving multiple negative and, more significantly, positive feedback loops. Globalisation should be conceptualised as a series of adapting and co-evolving global systems, each characterised by unpredictability, irreversibility and co-evolution. Such systems lack finalised ‹ or ›order‹; and the many pools of order heighten overall disorder. They do not exhibit and sustain unchanging structural stability. Complexity elaborates how there is order and disorder within these various global systems. The global order is a complex world, unpredictable and irreversible, disorderly but not anarchic.« (Urry 2004)

With statements like this, John Urry has been often at the forefront of interdisciplinary developments in modern sociology and social theory in recent times. His research on the transformed relationships between mobilities, transport, leisure, imagined communities, and globalization and citizenship has had a significant impact in the social sciences and humanities more generally. His much discussed book, Sociology Beyond Societies: Mobilities for the Twenty-First Century (2000) has become something of a contemporary classic. Books like Economies of Signs and Space (co-authored with Scott Lash), *Bodies of Nature*, and *The Tourist Gaze* make Urry one of the most exciting writers in modern sociology.

His latest book on Global Complexity opens up a totally new field of research in social science and makes him and his writing once more a modern classic. *Global Complexity* was the issue of an intriguing »Author Meets Critic session« with John Urry, Hermann Schwengel and Matthias Junge. The session was a lively event with a dynamic discussion between John Urry, his critics and the audience. In the following we document the content and the key arguments.

John Urry: Global Complexity

Various analysts at the beginning of the twenty-first century are developing and applying the physics of complexity to contemporary social science. John Urry's

work on complexity is organised around the emergent literature and examines overlaps and interplays between analyses of physical and social worlds. This literature is seeking to found what we might term a twenty-first century social physics. Physicists and mathematicians seeking to analyse especially the mathematics of networks are turning to the sociology of social networks, while sociological and more general social science analyses of global processes increasingly deploy the physics and mathematics of complex, non-linear adaptive systems (see Capra 2002, for an interesting crossover).

Various social analysts of modernity and globalisation implicitly draw upon ›complexity‹ concepts and ideas even where these are not explicitly articulated. Giddens characterises the modern world as being like a driverless out-of-control ›juggernaut‹ system that has set in motion irreversible processes stretching across the globe and generating various uncontrollable side-effects (1990). Harvey describes the processes by which time and space are not given and absolute but are increasingly ›compressed‹ by various novel technologies of transportation and communications that subdue and unify space (1989).

More recently, Bauman describes the nature of a speeded-up ›liquid modernity‹ as it shifts from one that is heavy and solid to one that is light and liquid and where speed of movement of people, money, images and information is paramount (2000). Analogously, Hardt and Negri suggest that nation-state sovereignty has been replaced by a single system of mobile power, of ›empire‹. This is a ›smooth world‹, de-territorialized and decentred, without a centre of power and with no fixed boundaries or barriers. All is movement (Hardt/Negri 2000: 136).

Castells sees the strength of increasingly global networks as resulting from their self-organising nature and not from centralised hierarchical direction as with older style rational-legal bureaucracies. He shows the ›chaotically‹ subversive effects of the personal computer upon the state bureaucracy of the Soviet Union that historically controlled all information flows including access to the photocopier (Castells 1996: 36–37, 2001). With regard to science Rifkin notes that contemporary ›science‹ no longer sees phenomena ›as static, fixed and given‹; the observer is seen as changing that which is observed, apparently hard and fast entities are always comprised of movement, and there is no structure seen as separate from process (2000: 191–193). Beck describes various boomerang effects, i.e. how corporations and states generate consequences that return to haunt them since these are complex systems where everyone is simultaneously inside and outside. Each suffers the unintended consequences of the boomerang returning to slice off the head of its thrower (2003). Elsewhere, Urry deploys the notion of ›global complexity‹ to examine the uneven, unpredictable and for a time irreversible processes of change sweeping across the contemporary landscape (2003).

So notions of a new ›social physics‹ are in the air; there is an emergent ›complexity structure of feeling‹ (Thrift 1999; Kwa 2002; Maasen/Weingart 2000). Indeed a complexity manifesto is being developed in various works exploring the overlaps and parallels between the physical, biological and social worlds. Noticeably, Capra has produced a ›unified conceptual framework for the understanding of material and social structures‹ (2002: xv; see Capra, this volume). Many writers are analysing ›events, novelty and creativity‹, seeing these as organised in and through various nonlinear dynamic systems possessing emergent or vitalist properties (see Fraser/Kember/Lury 2004).

The US-based Gulbenkian Commission on the Restructuring of the Social Sciences, chaired by Wallerstein and including non-linear scientist Prigogine, reflected this emerging complexity turn. It advocated breaking down the division between ›natural‹ and ›social‹ science since both are to be seen as characterised by ›complexity‹ (Wallerstein 1996). The Commission recommended how scientific analysis »based on the dynamics of non-equilibria, with its emphasis on multiple futures, bifurcation and choice, historical dependence, and (…) intrinsic and inherent uncertainty« should be the model for the social sciences; this undermines, they argue, clear-cut divisions between social and natural science (Wallerstein 1996: 61, 63).

Physicists Laughlin and Pines summarise that while physics once studied fundamental laws to which everything could be reduced, it now studies multiple forms of organisation:

»The central task (…) is no longer to write down the ultimate equations but rather to catalogue and understand emergent behaviour (…) the study of complex adaptive matter (…) We are witnessing a transition from (…) reductionism, to the study of complex adaptive matter« (cited Buchanan 2002: 207)

Self-assembly at the nanoscale is a current example within science and technology of new analyses of complex organisation.

Many authors describe the current state of the globe as ›an intractably disordered world‹ (Gray 2001). In his new book Global Complexity, John Urry shows that ›complexity‹ provides some metaphors, concepts and theories essential for analysing such intractable disorderliness. Existing global analyses lack the kind of conceptualisation necessary for examining these strangely ordered systems that are complex, rich and non-linear, involving multiple negative and positive feedback loops. Such global systems are characterised by unpredictability and irreversibility; they lack finalised ›equilibrium‹ or ›order‹; there are following Prigogine pools of order that heighten overall disorder. Systems do not exhibit and sustain unchanging structural stability. Complexity elaborates how there is order and disorder within all physical and social systems. Following Gray, we can see how there is a complex

world, unpredictable and irreversible, disorderly but not anarchic (see Malpas/ Wickham 1995, on sociology's obsession with systems as necessarily ordered).

One feature of this disorderliness can be seen through the prism of ›empire‹. Hardt and Negri argue that the concept of ›empire‹ has replaced nation-state sovereignty or ›society‹. By ›empire‹ they mean the emergence of a dynamic and flexible systemic structure articulated horizontally across the globe, ›governance without government‹ that sweeps together all actors within the order as a whole (Hardt/Negri 2000: 13–14). Empire is the sovereign power, a ›smooth world‹, the single logic of rule that now governs the world. This new sovereignty is de-territorialized and decentred, with a merging and blending of a ›global rainbow‹ (Hardt/ Negri 2000: xiii).

However, a complexity analysis would suggest that the concept of ›empire‹ is too generalised. It is more consistent with complexity formulations to think of empire not as characterising global relations as a whole. Empire is more a strange attractor. Thus, through iteration societies are becoming more like ›empires‹; over time they are being irreversibly drawn into the ›basin‹ of empire. There are various indicators of this iteration. Contemporary societies increasingly possess a visible imperial centre, with icons of power being buildings, landscapes and brands. Beyond the centre there is a spreading of effects outwards with a relative weakness of some borders. And within such ›empires‹ there are emergent inequalities rather than, as in at least welfare societies, attempts to create citizenship rights common throughout the territory. In particular, societies are drawn onto and attracted to the world-as-stage, i.e. showing off trophies, competing with each other for the best skyline, palaces, galleries, stadiums, infrastructures, games, skilled workforce, universities and so on. And societies as empires seek to avoid scandal and risk. Societies are drawn into this attractor, remaking some of them as ›empires‹. The US is the most powerful of such societal empires on the world-as-stage. It possesses a number of exceptional centres (NY, LA, Washington), many icons of power (Pentagon, Wall Street, Hollywood, Ivy League Universities, Texan oil wells, Silicon Valley, MOMA), a porosity of certain borders (see Davis (2000) on the US's Latinization) and huge ›imperial‹ economic and social inequalities. It is the paradigm case of ›society as empire‹, and is the exemplar for other societies, and other super-societies, to follow, to be drawn into the basin of empire.

And each society as empire produces its opposite, its co-evolving other, its rebellious multitude. Huge transformations are taking place in the production of ›empire-and-multitude‹ across the globe. Global markets generate ›wild zones‹ of the increasingly dispossessed, with significant parts of the former USSR, sub-Saharan Africa, the Balkans, central America and central Asia being places of absence, gaps and lack. Such zones possess weak states with limited infrastructures, no monopoly of the means of coercion, barely functioning economies often dependent upon

commodifying illegal materials, an imploded social structure and relatively limited connections to the global order. September 11th demonstrates the complexity of ›asymmetric threats‹, that ›wars‹ are increasingly fought between formally unequal powers with the apparently weak able to inflict massive blows on the apparently powerful (as well as the reverse of course; see Gunaratna 2002). It is almost the secular equivalent of ›The first shall be last, and the last shall be first‹. More generally through the various global fluids of money laundering, the drug trade, urban crime, asylum seeking, people smuggling, slave trading, and urban terrorism, the spaces of the wild and the safe zones of multitude and empire are chaotically juxtaposed (the ›boomerang‹ effect of global markets). Such markets have brought the ›whole world‹ closer and this is especially and paradoxically true of those bent on its violent destruction and especially on destroying the ›American empire‹.

In systems analyses, components are thus irreversibly drawn towards ›attractors‹. Such components within any system operate under conditions far from equilibrium, partly because each responds to ›local‹ sources of information. But components at one location have substantial time-space effects elsewhere through multiple connections and awesome trajectories. Such systems possess an unpredictable history which then irreversibly evolves and where past events are not ›forgotten‹. Points of bifurcation can be reached when the system branches; ›causes‹ and ›effects‹ can be disproportionate. There are nonlinear relationships between them with the consequence that systems may move dramatically from one state to another. Systems can reach ›tipping points‹ when what seems like long term stabilities unpredictably flip over into their apparent opposite. Examples of such tipping and bifurcation include the overnight ›collapse‹ of the Soviet Empire, the astonishing growth of the internet from almost no use to 1 billion users worldwide, the spread of mobile phones so that new mobiles are now more common than landline phones, the overnight emergence of global terrorism/fear after September 11th and so on.

This provides a rich and critical agenda for a complexity take on global dis/order.

Globalization – Challenging Sociology (Hermann Schwengel)

That globalization does mean an enormous challenge for sociology is probably not doubted by anybody. Nevertheless, there is a debate not only among the social sciences but among historians and anthropologists about how deep this cut really is. Somehow we are a little bit tired of books with the title The globalization of something or anything. But at the same time the need for understanding globalization is even growing faster than before. Maybe we are in the same situation as people in

the forties of the 19th century trying to understand what industrialization might mean. The facts obviously cannot be denied; people in the United States, for example, were beginning a new discourse on the meaning of economic man, taking the position the political man inhabited before. One decade ago some economists were sure that globalization would never get the depth and coherence like the concept of industrialization. In any case, Urry's book has arrived in the right moment to introduce the idea of global complexity.

Urry tries to move beyond established positions within social theory. There are no structures and no agencies, no macro- and no micro-levels, no societies and no individuals and no system worlds and no life worlds. This is, Urry continues, because each such notion presumes that there are entities with separate and distinct essences that are then brought into external juxtapositions with each other, as the white-knight-complexity moves in. Indeed, Urry is demonstrating the richness of this concept. A few examples need to be mentioned:

John Urry has studied mobility all his life. But he has a sophisticated sense for various immobilities in his concept of complexity. There are temporary moments of rest of a machine, there are short periods of storage, such as the overnight stay of a car in a garage on an airfield, or information within a database, or a passenger within a motel. There is the long-term infrastructural immobility, there is the intergenerational disposal of the materials from dead machines. These mobilities are hugely uneven in time-space, so that some zones are rich with movement and some are movement-poor, and in fact become relatively poor as mobilities happen elsewhere.

Secondly, Urry's approach allows mediating the concepts of societies and empire. Contemporary societies, Urry writes, possess an increasingly visible centre, with icons of power such as buildings, landscapes and brands, while beyond the centre there is a spreading of effects outwards with a relative weakness of borders. Societies are endlessly drawn into the global attractor and it is this that remakes them as empires. The USA is the most powerful and dominant of such societal empires currently strutting the world's stage. Each society qua empire produces its opposite, its rebellious multitude.

Thirdly, Urry is strengthening our senses for a glocalized cosmopolitanism in which, quoting John Tomlinson, cosmopolitans need routinely experience the wider world as touching the local life world and vice versa. In a way, theory of complexity and practice of cosmopolitanism shape each other in Urry's world.

For German readers Urry's book offers the interesting experience that rethinking complexity is possible without referring to the works of Luhmann and Habermas but directly through the experience of postmodernist sociology, cultural studies and network analysis. Maybe there is a new Europe in sociology, too.

Going through the experience of global complexity there is an irresistible desire to ask at the end: who governs complexity? When Michel Foucault introduced the wider idea of governance in the sense of the 17th century, including the governance of knowledge, transparency and bodies, he might have added the governance of complexity, too. Governing the hermeneutics of the subject (Foucault's title) and governance of complexity might have something in common.

The strong idea of relationality reminds us of the classical sociological approach of Georg Simmel, especially in his philosophy of money. Relationality seems to need a differentiated system of communicative media: money for the economy, power for the political system, truth and love for other systems. Does global complexity need some specific communicative media to express the character of fluidity, to use the chances and risks of uncertainty and to find the global attractors for one's own strategy? The idea of trust in the early writings of Niklas Luhmann before differentiating the media in the delineation of systems might be a candidate. Could one imagine that living global complexity demands some sort of trans-human trust to reduce the complexity of global complexities?

Only challenging books provoke challenging questions, not really expecting fully developed answers but some brainstorming of the ideas already designed in the book.

The Missing Link: Complexity Politics (Matthias Junge)

Matthias Junge's comment focuses on theoretical aspects of »Global Complexity«. In some aspects Global Complexity is a pathbreaking book. But in some respect it overestimates changes on the global level. Consequently Junge remains ambivalent in judging the book. In his view the book has a twofold message.

Sociology, Junge says, does not need a new sociology to deal with global complexity. This hypothesis is a reply to Urry's two main arguments. Urry reasons that we find a lot of new emerging social phenomena on the global level, which can be summarized under the heading of »global complexity«. Secondly, it is the property of complexity which leads John Urry to the conclusion that »the social sciences have to start more or less from scratch« (2003: 95).

This argument is convincing for many reasons. But Junge disagrees with the second argument. He shows that John Urry is actually using an old methodology, nevertheless he talks about complexity as a metaphor for new methods and a new methodology of the social sciences. This was first developed in the pragmatic tradition, above all by John Dewey, allowing the development of a naturalistic methodology, especially a theory of practice.

Concerning the first argument: John Urry samples a lot of evidence for new emerging phenomena using a somewhat unusual but helpful clarifying vocabulary. He particularly speaks of »global flows« to characterize the development on a global scale. These global flows, to name only a few, like »travelling peoples« (2003: 61), the internet (2003: 62), information (2003: 64) and »world money« (2003: 65) create a global world organized around an »attractor of the centriphery« (see Baker 1993), which is »glocalization« (2003: 84) producing simultaneously »patterns of order and disorder« (2003: 83).

These phenomena have roots and ancestors in history, including the pilgrims, merchandisers transporting information, and gold as a world money. We found patterns of order and disorder, too, especially in the constitutional period of nation building. However, it is the interplay between the new quality of these phenomena that creates a view of the global world as emerging »global complexity«.

Junge agrees with this argument and points out two instances where the power of the new concept is not really used:

First, John Urry makes the argument that under conditions of complexity it is not the difference between structure and process which needs to be analyzed, rather it is the »distinction between global waves and particles« (2003: 49). This picture seems to demand a relativistic methodology, which allows seeing the same thing as a wave and as particle, as in the case of light. Wave and particle are not different entities as John Urry suggests. Rather they are different ways of describing the same entity: a travelling person can be described as a wave, transporting energy, activities or world views, and in the same moment the person can be described as a particle, using transportation means, which is in need of places to rest, stay, consume or work. Used in this way the structure of global complexity is understandable as the double structure of interconnected and only analytically distinguishable viewpoints of social reality: namely, wave and particle.

Secondly, reading the book gives the reader the impression that complexity can only be studied as a given and without the possibility to change or influence further developments in global complexity. In a nutshell: the idea of complexity politics is missing. Such a conception could be developed going back to a theory of differentiation and interpenetration of influences, actors, institutions and organizations on a global scale to start with a concrete analysis of interdependencies and interplays between these factors. In this context we could also search for possibilities not to control the development of complexity, but rather to disconnect or stop interplays and interdependencies (see Offe 1986, 1989) which generate emergent complexity. Complexity politics would help actors cope with complexity.

To sum up: firstly, wave and particles seem to be good metaphors for processes on a global scale, however the metaphor should be used in a way usual in physics.

And secondly, the book is a strong request to develop a conception of complexity politics.

But what is the underlying methodology of »Global Complexity? Unfolding this point, one is led to the idea of »relationality« as a methodological concept. This concept goes back at least to Georg Simmel or even earlier to the philosophy of Friedrich Nietzsche and others.

This was the first moment reading the book when the reader becomes suspicious about Urry's second argument that global complexity is a situation where social scientists »have to start more or less from scratch« (2003: 95). To make this new start easier, John Urry borrows the methodology of complexity and chaos research to paint a picture of how we can generally develop insights and explanations of and for global complexity (2003: 76–103).

However: What is really new in this book? It is not complexity which only seems to be a new point of view. The history of the social sciences started with the notion of an overwhelming complexity of social reality (Pankoke 1977). And one of the first attempts to get an idea of this complexity was Herbert Spencer's thinking, i.e. developing system theory using an analogy between the complexity of organizational processes in biological and social entities. And the current state of complexity and chaos research is using an analogy between physical phenomena described in terms of irreversibility and nonlinear thermodynamics, and social phenomena described with the same vocabulary, for example a traffic jam.

Both attempts have one thing in common. It is the renewed, path-breaking idea that »causes are always overflowing ... across the supposedly distinct and purified ›physical‹ and ›social‹ domains«. (Urry 2003: 77). With this thesis the »two cultures« and, we have to add, worlds, collapse in one; there is only one unified reality, generating different worlds as different realizations of the same underlying principle.

But what is this principle? As far as I understood, the principle is the essential and existential presupposition: »experience is of as well as in the nature« as Dewey (1958: 49) said. Thus, we have to conclude a naturalistic methodology, a methodology which sees the mind and the social as a part of nature, however as a part which is not determined by nature (see Searle 2004).

What are the conclusions out of this sketch?

First, in the present global age we find a process of reunification of separate worlds that are governed by one single principle. The differentiation between the social and the physical sciences is eroding and will collapse in the long run.

Secondly, research on global complexity has a need for a naturalistic theory of social practice, a theory about how social practices generate global interplays and relationships and how these interplays influence social practices. To find answers for both questions we need to study the social practices of agents, institutions and organizations as waves and particles, creating the world of global complexity in this manner.

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