OF TIMESCAPES, FUTURESCAPES AND TIMEPRINTS

Lüneburg University, 17 June 2008

Barbara Adam

Introduction

Most of my writing is published in English but there is a significant body of work available in German, including a book translated by Suhrkamp, translated articles and papers written (in German) for the Tutzing Projekt 'Ökologie der Zeit'[1]. Rather than repeat any of this work I decided for this talk to concentrate on three key concepts which I developed in the course of my twenty-five years of research into social time.

What needs to be appreciated from the very start is that taking time seriously is not like a cooking recipe: take space and matter, add on time and stir. Rather, to make time a central feature of your work changes your understanding and your theory at the level of ontology, epistemology and methodology. To centrally encompass time in the analysis, therefore, presents significant challenges. In order to manage the resulting complexity of a thoroughly temporal perspective, I had to create new concepts. Three of these I want to introduce in this talk. They are:

- *Timescape*
- *Futurescape*
- *Timeprint*

The 'Timescape' Challenge: Engagement with the Invisible Temporal

To understand the challenges that are posed by a temporal perspective, we now need to unpack what might be involved. What is conjured up in our minds when you think of your 'own time', 'free time', 'study time', 'social time', 'family time', 'university time', 'institutional time', 'generational time' and 'historical time'?

Is 'your time' in which you meet with friends or see a film compatible with the processes and structures associated with study and work time? Is the time you spent eating at a restaurant compatible with meal time with your parents or the quick meal eaten in front of the TV? Are the historical times of dates and facts, or the natural time of growth and decay, compatible with the creation of identity and its embeddedness in historical contexts, relationships and traditions? My twenty-five years of time studies have shown that time is complex and multiplex, involving many different features and dimensions.

At the structural level of understanding, time involves a number of irreducible elements, the combination of which I have called '*timescape*' The 'scape' part of the concept acknowledges that we cannot embrace time without simultaneously encompassing space and matter, that is, without embodiment in a specific and unique context. Thus, a *timescapes* perspective acknowledges this spatiality, materiality and contextuality but foregrounds the temporal side of the interdependency.

---

[1] A separate list of German publications is listed at the end of this paper.

Before I elaborate on some of the details, I want to list the structural features and then take a number of the elements as examples to show what might be involved with each of them and to identify some of their key characteristics:

- *Time frame* – in what time frame? – bounded, beginning & end, day, year, life time (of, for example, a flea, a human being, an oak tree or a nuclear isotope), generation, historical/geological epoch, etc.
- *Temporality* – how? – process world, internal to system, ageing, growing, irreversibility, directionality;
- *Timing* – when? – synchronisation, co-ordination, right/wrong time;
- *Tempo* – at what speed? – pace, rate of change, velocity, intensity, or: how much activity in any given timeframe?
- *Duration* – how long? – extent, temporal distance, horizon: no duration means instantaneity, the moment in time;
- *Sequence* – in what order? – succession and priority: no sequence means simultaneity, at same time;
- *Temporal Modalities* – when? – individual and/or collective past, present & future

When several of these elements are brought together we begin to see patters of rhythmicity, periodicity and cyclicality. However, whether we see cycles of repetition or change and linear succession is relative. It depends on our temporal framework of observation. For example, when we focus on the minutiae of everyday life we see linear succession: one event following another. You come to the university to listen to lectures, one after the other. You follow your lectures in a linear fashion from beginning to the end. After having spent some time in the library and on the computer, you might go for a drink before making your way home. But when we widen the timeframe of analysis to the academic year, then the daily and annual repeating cycles of lectures and examination times become visible: with the wider temporal perspective the linear progression gives way to cyclical processes, only to be followed by another linear perspective when we focus, for example, on the historical change of university traditions and pedagogic practices.

The point here is a dual one: first, that temporal frames are not given but chosen and, secondly, that the temporal framework we impose determines what we can and do see. Similarly, it matters which temporal elements we primarily focus on and what combination of elements we bring together in our analysis. Let us consider here just some of these *timescape* elements, that is, 'time frame', 'timing', 'tempo' and 'temporality'.

I have already mentioned that your choice of time frame affects what you find. But the issue of the *'time frame'* is even more complicated than that. It is also a question about standpoint and perspective. It matters, for example, whether or not you place your subject and associated social relations in an objective frame of calendars and clock time, which positions your subject matter temporally in an externally located, socially constructed frame. These frames are stable and fixed: irrespective of your standpoint and perspective, the date this one-day conference will not shift from 17 June 2008, and the year of the dropping of nuclear bombs on Hiroshima and Nagasaki will always stay 1945.

In contrast, when you place your object of study in their subjective 'now', the situation becomes a very different one, as this now is relative and mobile and moves

with every new moment, situation and context. Equally, the implied past and future expands and contracts as people move along their life course. For a student at the beginning of their university studies school life is still near while the examination time at the end of university life seems in the distant. In contrast, for a student entering the bachelor or diploma phase of their studies, the situation is reversed. Moreover, it matters what the perceived end is: a first degree, a doctorate or a 'Habilitation' with the aim of becoming a professor, for example. As social and socio-environmental analysts we need to be acutely aware of these differences in framing and recognize their effects on investigations and findings.

Very different issues confront us with the temporal element of '*timing*' where we focus on social synchronisation, co-ordination and on questions about good and bad times for action. Here it matters greatly what kind of time is used as a timing and synchronising medium and whether or not the times to be synchronised are compatible to achieve good timing. Equally important is the social, political, economic, environmental, religious and socio-technical context of timing. And the latter is in turn intimately connected to the speed of change.

I would like to list here just a sample of different times that are routinely synchronised in daily life: First there is the time of calendars and clocks which is largely *in*variable and *un*affected by context. Secondly there is body time which is hugely variable as it is affected by age and degrees of wellbeing, for example. Thirdly there are the times of seasons and the different climatic conditions with their wide-ranging effects. Then there are the different opening and closing times of institutions, agencies, shops and places of work which are crucial to the timing of study and work. Different again is time internal to the task at hand: for example, the times of reading, writing an essay, preparing for examinations and doing an examination, the times involved in constructing a CV and presenting yourself at a job interview. As a last example we could consider times internal to the many technologies we interact with such as the differences in the communication times of face-to-face, letter, telephone, or internet; the mobility times of walking, cycling, driving a car or taking a bus, train or aero plane; or the times of cooking technologies involving an open fire, an electric cooker, or the micro-wave. All have different effects on our capacity to time and synchronise our actions. Yet, despite their significant differences they all need to be brought into one coherent frame of action. The more types of time involved, the more difficult becomes the task of synchronisation and timing.

'Tempo', the third *timescape* element I want to focus on relates to the speed, pace and intensity at which activities are conducted, work has to be completed and institutions change, to name just a few examples. Here we need to establish whether or not the speed is the same across various social domains and ask who establishes the pace for whom and on what basis. We need to understand what happens when there is a clash of tempi: children needing to adapt to the tempi of their parents; students being required to adapt to the institutional tempo of the university and its academic staff; workers having to conform to the efficiency requirements of their job where ever more work needs to be packed into the same unit of time; and the elderly being expected to conform to the pace of the working majority on the one hand and to institutionally paced schedules on the other. Furthermore, in order to understand the power relations involved, we need to consider a range of issues and questions. Here we need to ask: who has to do most of the adapting, why, and with what

consequences? What adjustments need to be made when the economic resource-time of public life clashes with the embodied process time of feeding a baby or an elderly family member with dementia? What happens when the speed of the internet or the market-driven speed fetish have penetrated family life?

What is most important to appreciate is that none of the structural elements, which make up the *timescape,* operate in isolation. They all mutually implicate each other. Therefore, when in our understanding and theory we concentrate on one particular element, we must not lose sight of the others but keep track of them in our peripheral vision. That is to say, they have to remain implicated and included as a central back-stage element to our focus and the resulting analysis.

The complexity of a *timescape* perspective is further increased when we focus on 'temporality' as this entails engagement with processuality and the invisible. Here I would like to venture into issues of methodology and briefly consider the impact of the temporal perspective on scientific practice.

To fully appreciate the challenge of the temporality element of a *timescape* it is helpful to plot it against the back-drop of traditional empirical study. Conventional empirical study seeks to produce factual results. This involves focus on space and matter, that is, on material, spatially located facts and relations rather than the 'immaterial' world of processes. As such, empirical investigation deals with phenomena that can be counted and quantified, or at least described in factual terms. Moreover, in traditional scientific study change is demonstrated though snapshots on a before-and-after basis, that is, by comparing earlier with later states. Processes as such are outside the framework of investigation: matter in space is visible; processes are not. We can recognize the latter's workings only with hindsight, that is, by a friend's hair having gone grey, the new car having gone rusty, radiation pollution emerging through cancer symptoms.

We know how to study the outcomes and the symptoms of processes set in train by action but not how to investigate the processes involved. And yet it is these we need to access if we want to study the dynamics of actions; if we want to explore how the socio-environmental world is formed, maintained or reworked over time; if we want to understand the production of environmental hazards; and if we want to appreciate *how* the individual, the social, the institutional, the historical and the socio-economic, political and socio-environmental aspects of our lives are interconnected as well as mutually implicating and forming.

Past approaches to social time have analytically broken down the complexity by working with a range of dualisms such as public and private, cyclical and linear, clock and process time as well as external and internal or objective and subjective time and many, many more. In contrast, a *timescapes* perspective involves a quest to understand the dynamics of relationships, interdependencies, and embeddedness. It seeks to connect process to structures, relate macro and micro perspectives of social change and to understand the nature of their interpenetration. This of course is a much more difficult task than establishing dualisms and then discarding the part that is not easily amenable to empirical study.

Taking time seriously, as I mentioned before, changes socio-environmental analyses ontologically, epistemologically and methodologically. That is to say, it alters our subject matter, how we know it, and how we study it. Embracing the complexity of time, therefore, demands that we adapt and change established theories and methods, that we produce conceptualisations appropriate to the task and that the necessary reflexivity becomes an integral part of our analyses. The *timescapes* perspective was the first challenge I wanted to introduce here, the second relates the future, which constitutes just one element of the *timescape*. The complex issues and questions arising from our approach to the future are addressed in what follows.

'Futurescapes' Challenges
Everything we do in our lives is not just embedded in a socio- historical past but also projects into a socio-environmental future. Our hopes, plans and fears take us into the future and we move in this domain with great agility: we make choices. We way up risks and chances. We calculate the likelihood of success. Thus, futures are created continuously, across the world, every second of the day. They are produced by the full range of social institutions: politics, law and the economy, science, medicine and technology, education and religion. And futures are produced at all levels of social relations: the individual, the family, social groups, companies and nations. These created futures extend temporally from the very short to the extremely long-term and spatially from the local to the regional, national, international and global. The future is therefore an inescapable aspect of social and cultural existence

This centrality of the future in our lives is not reflected in the theories and studies of that world. As the 'not yet' the futures domain is inaccessible to factual empirical study and evidence-based science. This differentiates the future from the other temporal modalities. Thus, for example, the past is accessible to us through its memory traces and records. It even has its own dedicated academic discipline and it is regularly encompassed by factual science. Similarly, the present is accessible through perception, observation, face-to-face interaction and, in mediated form, through many technologies. Both the present and past are the primary domains of scientific, evidence-based investigation. The future, in contrast, is neither accessible as sense data nor has it a dedicated academic discipline, this despite the fact that our social science subject matter is fundamentally extended across all the modalities of time, that is, past, present and future. To take the future seriously, therefore, has even deeper implications for our work than the ones we have just begun to outline for the *timescapes* perspective. To centrally encompass the future and futurity in our studies and analyses, therefore, changes science in general and the social sciences in particular at the level of ontology, epistemology and methodology.

Ontology, Epistemology, Methodology
One conventional way to cope with the future has been to spatialise it, that is, to think of it as a territory to be conquered or a vessel to be filled. But, what might be involved to conceptualise the future not spatially but temporally? What would that mean ontologically? What would we then think the future was? Remember, I have argued earlier that the future is part of the modalities of time (past, present and future) and that the modalities are one of the structural elements of the *timescape*.

When we explore the future at this level interesting features emerge. We find that just like in a hologram or in a fractal, the parts encompass the whole and replicate its key

features. In this case the future's structural elements replicate those of the *timescape*, although the emphasis of the elements changes with the explicit focus on *futurescapes.*

- Here too there are bounded *Time Frames* – that encompass the day, year, life time, generation, historical or geological epochs, etc;
- Here too we have *Temporality* – process world, internal to system, with irreversible directionality, that is, into an unbounded future;
- Here too we have *Timing* – the synchronisation and co-ordination of plans and projected outcomes;
- Here too we have *Tempo* – the speed, pace, rate of change, velocity, intensity of projected actions and processes in progress: how much activity is packed into a projected future or a future already in the making;
- Here too we have *Duration* – which relates to the extent, temporal distance and the future horizon;
- Here too we have *Sequence* – that is, the order, succession and prioritising of plans and their activation;
- Here too we have *Temporal Modalities:* Past, Present & Future – here the future is fore-grounded and not just preceded but informed and constituted by past and future. However, it matters, how the temporal modalities are combined: whether the focus is on *past futures* or *future pasts* or on *present futures* or *future presents*.

Knowing some structural features of the *futurescape*, however, leaves still a host of questions to be answered. When we want to know what the future *is* then we also need to ask: what kind of an entity, or sphere or 'scape' is the future? Thus we need to consider whether the future is

- a sphere of purposive (trans)action
- a sphere of ideas, beliefs, knowledge
- a sphere of mind, imagination, language
- a sphere of social practice in all domains life
- a sphere of morality, ethics, values, obligations, critique
- or a sphere of freedom, choice, intention, motivation, instrumentality.

We need to further consider whether we think the future is real, ideal, material, immaterial, visible, invisible, embodied or abstracted.

Once we ask these kinds of questions we will find that our answers influence not just our ontology but also our epistemology, our methodology, and our results. In other words, it affects the mode of knowing and what can be found. And, finally, it affects the choice of ethical approach. With the *futurescape*, as with the *timescape,* what you see and find is relative to the questions you ask and to the framework of observation you apply and impose on your subject matter. It is for these reasons, therefore, that *your assumptions, your questions and your framing should form an integral part of your analysis and be made explicit in your findings.*

In this brief talk I cannot cover all the mutations of the possible approaches and investigations outlined above. Instead, I would want briefly to open up some further issues for consideration and in the process give you my perspective on it.

Futures in the Making: Issues for Consideration
As the realm of the 'not yet' the future is not accessible to the senses. It is not knowable – to know it would require pre-cognition and clairvoyance. In light of this

quality the future is conventionally understood as an aspect of mind. As part of our imagination it is considered unreal until it materialises as a physical phenomenon in the present. In contrast I want to propose that futures are not merely an aspect of our mind or imagination, that much of this future world of our making is neither merely an aspect of our mind nor material in the conventional sense. Instead, this 'not yet' is marked by invisible latency and immanence. It is a world of deeds under way that have not yet materialised as symptoms, not yet congealed into matter. These latent futures in the making are set in motion by socio-political, legal, scientific, economic and everyday performative, enacting practices and as such they are real and material at the level of processes rather than products of action.

A second conventional way of approaching the future is to view it as open and empty, as a realm that is to be filled and shaped by present desire, will and action. From this perspective, present action shapes future outcomes. However, this perspective loses sight of the fact that actions and processes associated with 'futures in the making' are ongoing, that past future-creating actions make up our present and future as well as the past, present, and future of successors. Thus, we need to remind ourselves that our future-creating actions make up not just our future and the future of contemporaries but also the past, present and future of successors. Future-creating actions thus produce layers and layers upon layers of past and present futures as well as future presents and pasts.

Our standpoint and perspective therefore matters. It makes a difference whether we approach the future from the standpoint of the present, that is, as *present future* or from the standpoint of the future, that is, as *future present*. Those two different standpoints provide very different action potential: from the position of *present future* I understand the future as mine to shape and create. From the position of *future present,* in contrast, I know myself to be acting and trespassing in the rightful domain of others, that is, I am borrowing from the *future present* of successor generations. The stand point of the *present future* is the position that is taken daily in economic, political and institutional practice: it takes from the future for the benefit of the present. From the standpoint of *future present*, in contrast, the shaping of the future is an inescapably socio-political act which belongs to the realm not of science but of morals and ethics. From that standpoint we acknowledge that there can be no scientifically objective and neutral trespassing or borrowing of our successors. As a standpoint, focus on the *future present* positions us with reference to deeds and processes already on the way and it allows us to accompany actions to their potential impacts on future generations. It enables us to know ourselves as responsible for the time-space distantiated effects of our actions and inactions. *To take that standpoint, however, requires that we first understand as real and living the invisible, effecting process futures in progress.*

Timeprint
To encompass our future making and its latent, potential effects I have developed the concept of *timeprint. Timeprint* is the temporal futures equivalent of the idea of an ecological footprint, that is, how far the impact of our present mode of life extends not just across space and matter but also across time. Conceptualisation of the *timeprint* allows us to draw attention to the way that certain knowledge practices lead to a consumption of future potential, thus to a taking of futures that are the rightful present domain of future generations. And it enables us to focus on the mismatch between our

enormous capacity to make futures (extending our impact for literally millions of years), our poor knowledge of potential outcomes and, as a result, our irresponsible approach to shaping and creating futures to our will and desire. In other words, it recognizes that our knowledge, concern and responsibility do not match the temporal reach of our actions. Knowledge of this troubling relation shifts our sense of rights, duties and responsibilities. When the understanding of our *timeprint* is applied to environmental matters and concerns then we are taking first steps to operationalize *timescapes* and *futurescapes* perspectives.

References

Adam, B. 1998 *Timescapes of Modernity. The Environment and Invisible Hazards.* London: Routledge.

Adam, B. 2004 *Time,* Cambridge: Polity.

Adam, B. 2005 *Das Diktat der Uhr.* Frankfurt a.M.: Suhrkamp.

Adam, B. and Groves, C. 2007 *Future Matters. Action, Knowledge, Ethics,* Leiden: Brill.

Adam, B. and Groves, C. 2007 *Glossary of Key Terms* (pdf format) http://www.cardiff.ac.uk/socsi/futures/briefings.html

www.cardiff.ac.uk/socsi/futures

Work Published in German

Adam, B. 1995 `Symphonien von Ur- und Uhrzeiten: die Rhythmen des täglichen Lebens', in K. Geißler and M. Held (eds) *Von Rhythmen und Eigenzeiten. Perspektiven einer Ökologie der Zeit.* Stuttgart: Edition Universitas, Hirzel, pp. 19-31. ISBN 3-8047-1414-5.

Adam, B. 1995 `Auf dem Weg zur Laborzeit: Wandel der Zeiten in der Landwirtschaft', *Politische Ökologie,* Sonderheft 8:20-25. ISSN 0947-5028.

Adam, B., K A Geißler and M Held 1998 *Die Non-Stop Gesellschaft und ihr Preis,* Stuttgart/Leipzig: Hirzel, Wissenschaftliche Verlagsgesellschaft pp. 257, ISBN 3-7776-0796-7 (pb).

Adam, B. K. A. Geißler, M. Held, K. Kümmerer & M. Schneider (eds) 1998 *Ökologie der Zeit. Vom Finden der rechten Zeitmaße,* Munich: Ökom Verlag, pp. 38, ISBN 3-928244-42-6.

Adam, B. 1999 'Naturzeiten, Kulturzeiten und Gender - Zum Konzept "Timescape", in S Hofmeister und M Spitzner (eds) *Zeitlandschaften. Perspektiven öko-sozialer Zeitpolitik.*Stuttgart: Hirzel. ISBN 3-7776-0875-0 pb.

Adam, B. 1999 'Timescapes - Zeitlandschaften: Ein neuer Blick auf Raum und Zeit' *Politische Ökologie* 57/58:88-90 ISSN 0947-5028.

Adam, B. 2000 'Zeitpolitik und Gender: Eine zeitokologische Perspektive für Umweltsoziologie' in Nebelung, A., Poferl, A. and Schultz, I. eds. *Geschlechterverhältnisse – Naturverhältnisse. Feministische Auseinandersetzungen und Perspektiven der Umweltsoziologie.*Opladen: Leske & Budrich, pp 227-244 ISBN 3-8100-3064-3

Adam, B. 2000 ,Die verborgene Dimension der Zeit' *Rundschreiben des Freideutschen Kreises* Kassel: Freideutscher Kreis, pp.121-133.

Adam, B. and Hofmeister, S. 2000 'Vorsorgendes Wirtschaften in Zeiten. Zur Bedeutung der Zeitvielfalt für eine Ökonomie der Vorsorge.' in A Biesecker, M Mathes, S Schöne, B Scurell, Babette (eds.) *Vorsorgendes Wirtschaften.*

Auf dem Weg in eine Ökonomie des Guten Lebens, Bielefeld: Kleine Verlag pp. 238-248 ISBN 3-89370-343-8

Adam, B. 2001 ‚Kann man die Zeit der Natur managen?' *Die Zeit im Griff – im Griff der Zeit,* Materialband, in Rager, A. (ed.), Tutzing: Evangelische Akademie, pp. 61-7.

Adam, B. 2005 *Das Diktat der Uhr*, transl. Frank Jakubzik, Frankfurt, a.M.: Suhrkamp, Edition Zweite Moderne ISBN 3-518-41678-2.

Adam, B. 2006 ‚Leere und Gelebte Zeit - Über den Umgang mit Zukunft' (pdf format) Tagungsvortrag zum Thema *Zeit der Zukunft – Über den Umgang mit Nichtwissen*, Tutzinger Projekt ‚Ökologie der Zeit', Evangelische Akademie Tutzing http://www.cardiff.ac.uk/socsi/futures/briefings.html

Adam, B. 2008 ‚Mobilität/Verkehr' *Zeitpolitisches Glossar: Grundbegriffe, Felder, Instrumente, Strategien. Tutzinger Materialien 90*, pp 51-53. ISSN 09307850.

Adam, B. 2008 *Menschliche Vergänglichkeit und das Streben nach Unsterblichkeit. Fundamentale Unsicherheit – Grundlage von Kultur und Religion.* Tagungsvortrag zum Thema *Religion – Natur – Zeit,* Tutzinger Project ‚Ökologie der Zeit', Evangelische Akademie Tutzing (pdf format) http://www.cardiff.ac.uk/socsi/contactsandpeople/academicstaff/A-B/professor-barbara-adam-overview.html

Biographical Details

Barbara Adam, PhD, DScEcon, is Professor of Sociology at Cardiff University. She has written extensively on the matter of social time. Her publications on the subject include five books based on her research and an equal number of edited books as well as over 100 articles. She is founder editor of the journal *Time & Society.*
http://www.cardiff.ac.uk/socsi/contactsandpeople/academicstaff/A-B/professor-barbara-adam-overview.html
http://www.cardiff.ac.uk/socsi/futures/