

## **Future Matters: Challenge for Social Theory and Social Inquiry**

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### **Abstract**

Social action is performed in the temporal domain of open pasts and futures. It is both mindful of the recoverable and lived past and projectively oriented towards an intangible future. It sets processes in motion that ripple through the entire social system, across space and time, to eventually emerge as facts. This futurity of action tends to get lost in analyses that concentrate primarily on empirically accessible, factual outcomes of plans, decisions, hopes and fears. To encompass this 'not yet' as central component in the production of social facts requires changes to social theory and the logic of social inquiry. It necessitates an openness to rethink the subject matter of sociology, its epistemology and its methodology. The paper presents a broad-brush socio-historical analysis of changing approaches to the future as foundation to theoretical considerations of necessary conceptual changes to the discipline in order that social futurity may be accorded its appropriate place in the study of social life.

### **Introduction**

Contemporary daily life is conducted in the temporal domain of open pasts and futures, mindful of the lived past while projectively oriented towards the 'not yet'. We move in this temporal domain with great agility, pirouetting and swivelling to face both past and future, twisting and turning in the knowledge realms of perception, memory and anticipation. We operate with equal confidence in the action domains of choice and planning, where we are engaged in future making and future taking. Without giving much thought to the matter we alternate perspectives between *future presents* which we anticipate and *present futures*<sup>1</sup> which we enact. While our practical understanding includes the future orientation as an inescapable feature of social existence, for the study of that life the future poses major challenges because it lacks the tangible materiality needed for empirical study. This difficulty should not be taken as an excuse to place futurity outside the social science frame of reference. Rather, it needs to be acknowledged and understood in order to adapt our modes of inquiry.

If the future is an inescapable aspect of human being and social life through action that is purposive, intentional and motivated, as well as goal and value orientated then the future is *de facto* a subject matter for the study of that life. If some of the key institutions of social life are future orientated, such as religion, education, politics, economics, work, family, science, business and organisations then this future orientation is *de facto* a subject matter for institutional analysis. Finally, if the production of the future is the purpose of economic, political, scientific, educational, environmental activity, then it is *de facto* a subject matter of the study of these social activities. Study of this temporal domain may be extremely challenging but the

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<sup>1</sup> The distinction between *present future* and *future present* has been introduced to social science by Niklas Luhman (1982: 281) who suggested that the present future is rooted in a utopian approach which allows for prediction whilst the future present is technologically constituted and as such enables us to transform future presents into present presents. In Adam and Groves (2007) the distinction is expanded and theorized with reference to standpoints that position us differently vis-à-vis our impact on successors.

associated difficulties are no adequate reason to bracket social futurity from mainstream social theory and research.

For sociology to address the disjuncture between social life and its academic modes of inquiry, I want to suggest, needs a multi-pronged approach to aid understanding, and facilitate a critical theoretical perspective which in turn helps to identify openings for change. It first requires historical understanding of every-day, expert and academic approaches to the future. Four historically distinct understandings and assumptions about the future are identified here together with their associated expertise and modes of inquiry: the future as fate, fortune, fiction and fact. Through this historical understanding theorists can appreciate the depth of the challenge that futurity poses for the discipline and its logic of social inquiry and are able to explore how the gap between social action and empirical study of that action might be narrowed. Clearly, this is a huge programme of work which needs extensive research. In this paper I can do no more than open a window on the issues, map some outlines of key arguments and show their pertinence for the study of contemporary social life.

### ***The Future as Fate***

Some of the earliest approaches to the futures can be gleaned from mythology (Littleton, ed. 2002). In this ancient world gods and ancestors set the world in motion and move it in particular future directions. The myths of ancient and traditional cultures portray a world where people have dominion over space and matter only, while the temporal domain belongs to gods (or to ancestors as is the case in African and Australian myths). Here, the unknowable future is projected onto the sacred realm and has a particular status; it pre-exists as fate. To penetrate this opaque, pre-destined realm requires experts with special access to divine purpose, that is, knowledge about what god(s) and spirits have in store for individuals and collectives. Often, experts on the sacred, pre-existing future are message-bearers through which supernatural beings convey their will. The source of this specialist knowledge is external to the oracles, prophets and mediums that act as mere conduits for the messages of god(s), spirits and souls from the netherworld. Importantly, these experts seek answers to specific questions about what is going to happen, in a certain situation, to a particular person or groups of persons. As such, prophecies and divinations are to aid people's efforts to be prepared and ready for what is to be and come about.

This understanding of the future as pre-destined fate has been largely displaced during modernity and substituted with the unquestioned assumption that the future is ours to make, shape and exploit. Modernity has swept away the universe of faith and people have been transmuted from recipients of fate to makers of their own future. As they assumed ownership, they began to approach the future as a source of fortune destined for the present.

### ***The Future as Fortune***

In western cultures this dramatic shift in perspective on the future from fate to resource and source of fortune occurred slowly over a period of some four hundred years. The French Revolution is a key exemplar of this changed futures perspective. During that period key thinkers from Condorcet to Comte saw themselves as moral agents for change. They were concerned not just to 'unveil' a pre-existing, pre-

destined future but to steer it in a particular direction (Manuel 1962). This involved a fundamental shift in understanding of and approach to the future. Ownership of the future shifted from gods and ancestors to people. The future has been transmuted from a pre-destined realm of unique individuals and groups, into to an abstract, empty and quantifiable entity available for unrestricted use and free exploitation. The future as domain of fate gives way to the future as realm of action potential: the future becomes ours to shape, make and take. This means that individual fate as a *future fact* is displaced by a domain of probabilities which is subject to calculation on the basis of *past facts*. Divorced from context the abstract and empty future can be exploited anywhere, at any time and for any circumstance. It is treated as resources to be traded and exchanged for wealth creation. As open realm of potential it practically requires shaping and making. It becomes a task for planning, holding out the promise that it can be what we want it to be.

However, the very openness and emptiness of the future of fortune brings with it problems for knowledge and enforces significant changes in expertise. Without predestination the future no longer exists as *future fact* and knowledge about it has to be achieved from the present as *present future*. During the early phases of this transition while social change was still slow and overall structures remained stable across the life times of individuals a certain level of predictability could be maintained. However, with the pursuit of progress, the social goal was no longer stability but change. Stability became associated with standing still and being out-moded. Thus, while the quest for progress produced futures that extended into ever more distant times, as well a providing increased wealth and prosperity, it simultaneously reduced the certainty of outcomes. Here we see a scissor movement: with the increase in future making the future becomes ever less knowable.

In light of this difficulty, experts on the future had to find new approaches to knowing the 'not yet'. They shifted attention from the *future present*, which had become unknowable under the modern conditions, to the *present future* as the outcome of human choice. Prophecy and divination were abandoned in favour of scientific methods. Experts on the future of fortune are no longer forewarning of an impending fate, or concerned with what will be happening in the lives of specific individuals and groups of people. Instead, the focus shifts from individuals to collectives and averages. Importantly, the source of knowledge for this present future is sought in the past: in past occurrences and patterns of occurrences. The future of fortune is calculated on the basis of present and past collective data projected into an empty future as general trend. As such, expert knowledge of this future is no longer intended to assist people to adapt to their fate but to aid intervention and social engineering on the one hand and the pursuit of progress, innovation and growth on the other. Both science and economics, for example, make extensive use of this method by drawing on accumulated evidence and, on the basis of this, make probability calculations about an average future, projected as trend or cycle (Bell 2003, de Jouvenel 1967).

This scientific method of knowing the future works, up to a point, as long as change is moderate and sufficient past facts are available from which to calculate a probable future, that is, as long as the past can act as indicator for the present and future. However, as Aurelio Peccei (1982: 11) points out, when the future is no longer a continuation of the past, but a consequence of actions and choices in the present, it is no longer knowable on the basis of accumulated facts and lessons of from the past. A

number of developments during the 20th century brought with it such significant changes that the belief in a calculable future became delimited and for certain conditions turned out to be a fiction (Colborn et al, 1996).

### ***The Future as Fiction***

The first problem for a future calculated on the basis of the past was the pursuit of progress itself, since it was tied to a commitment, a compulsion even, to innovate and change, with instability rather than stability being the inherent goal (Bury 1955/1932). It meant that the less the present could be expected to be a repetition of the past, the shorter would be the potential horizon of planned action with predictable outcomes. With the persistent and intensified pursuit of progress, therefore, the past lost much of its unquestioned position as knowledge base not only for *future presents* but also for *present futures*. In addition, when one change chases the next, the pace of life becomes accelerated. Changes stack up and accumulate. As Karl Marx and Friedrich Engels noted so memorably in their *Communist Manifesto*:

All fixed, fast-frozen relationships, with their train of venerable ideas and opinions, are swept away, all new-formed ones become obsolete before they can ossify. All that is solid melts into air... (Marx and Engels 1967/1848: 224)

In contexts of such all-encompassing change, moreover, the emptiness of the future is compromised. The abstract, empty future is becoming a crowded space, a territory congested with intended and unintended consequences of our own and predecessors' dreams and desires. Consequently much of planned future making has to give way to future repair and damage limitation. Even this, however, is beset by problems since, outcomes and products of the abstracting, quantifying mode of knowing sit uneasily in the interconnected, interdependent temporal world of social and ecological processes, with their jarring often producing further unintended, indeterminable consequences.

This cluster of interrelated consequences of future making in conditions of modernity is nowhere more apparent than with contemporary information and communication technologies (ICT) where succession and duration have been replaced by seeming instantaneity and simultaneity, which means that both time and space are altered in those relations of communication. Networked information is distributed simultaneously across space and instantaneously across time. With ICT, movement across space has been de-materialised; duration has been compressed to zero and the present extended spatially to encircle the earth. For people with access to ICT, and those implicated in their effects, therefore, the present has been globalised. This electronic present bestows on people powers that had previously been the preserve of gods, that is, it makes us 'all-seeing', and endows us with the capacity of supernatural beings to be everywhere at once and nowhere in particular (Adam 1995, 2004). Importantly, when in principle everyone has access anywhere with the potential to influence anyone, probability of future outcomes, let alone certainty, is no longer attainable. This difficulty is further increased with the loss of time gaps between before and after, which means that the assumption of causality and sequences, which underpins daily affairs, is no longer workable. Knowledge practices and expertise on the future have to adapt and alter.

The fictional status of the future intensified with a wide range of technologies from genetic engineering to nano-technology. Most notably among these is the development of the nuclear bomb which brought to an end the certainty of continuity.

Without assurance of continuity, humanity has to learn to live with the potential end in the present. This means that not just our individual but also our collective lives are ‘lived unto death’ in the Heideggerian sense. In a context where we are deprived of the taken-for-granted fundamental assumption that successor generations will carry on where we leave off, faith is required to maintain belief in this particular fiction.

In light of such developments Helga Nowotny (1994/1989) suggests that the future is being eliminated and replaced by an *extended present*. In a present overloaded with choices, she proposes, the future is being determined now. Stumbling from one correcting measure to another, Nowotny (1985) considers us unable to get beyond having to cope with the innovative present. Moreover, an incessant need for innovation creates obsolescence at an ever-increasing rate which poses problems for future absorption. Again these are difficult issues that have to be dealt with in the present, with the effect that the future is incorporated into the present. For Nowotny, therefore, today’s preoccupations with the future signify nostalgia for something that is about to disappear.

Experts on this fictional future require new skills to supplement those of evidence-based science and economics where probable futures are calculated on collective data from a known past. These new skills, which experts on the future require in order to grasp the fictional future and the extended present, are tied to knowledge about complexity and interdependence. This means that expertise on the fictional future and extended present has to transcend the binary thinking of the past and engage with systems thinking. The systems perspective facilitates an appreciation of how the tiniest change can ripple through the entirety of a system with unintended, unknown and unknowable consequences. Moreover, this understanding needed to be expanded to apply not just to ICT and other contemporary technological future productions but to all of life’s processes, given that from this knowledge perspective it becomes apparent that all creatures produce futures through their mere being in the world. Every breath they take, every blade of grass they eat, impacts on their world and creates chains of effects that ripple out into an open future (Adam 1998). Humans, of course, are not exempt from this inescapable future-producing capacity. They too are tied into a boundless web of interdependent relations of doing and receiving, giving and taking. As Hannah Arendt noted more than half a century ago,

[...] the smallest act in the most limited circumstances bears the seed of the same boundlessness, because one deed, and sometimes one word, suffices to change every constellation. (Arendt 1998/1958: 190)

Clearly, the trusted dualisms of past or present, present or future, local or global, individual or collective can no longer be relied upon to provide appropriate understanding. Only systems thinking can handle these interdependencies and mutual implications and theorize their consequences<sup>2</sup>.

However, while systems thinking is clearly an important corrective to the knowledge of possible and probable futures, it is not sufficient to understand contemporary *social* relations of the future. From a social theory perspective there are still numerous issues that require further exploration and discussion. In particular there is the question about the reality status of the future: is it ideal or real, fiction or fact? How these

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<sup>2</sup> See Adam and Groves 2007 for an extended discussion on systems thinking and its limitations for understanding futurity; also Adam 2005, a conference paper on complexity theory, futurity and social theory.

questions are answered, in turn, has significant consequences for the issue of responsibility for futures of our making.

### ***The Future as Fact***

Future making may have indeterminate outcomes for us in the present but it has outcomes never-the-less. As such it is real in its consequences, even if these are opaque to the people producing those impacts and effects. Every future making, we need to appreciate, does *not only* send ripples through the entire system across space and time it *also* inevitably involves future taking: it prefigures, shapes and forecloses *future presents* of successors. This important fact is easily forgotten once the idea has been naturalised that the future is empty and ours to make and take to our desire. Despite this collective amnesia, however, the assumption of the future as free resource for present use becomes today difficult to uphold as the empty futures of predecessors begin to impose themselves on our present, restricting our choices and options. Amidst debates about climate change, environmental degradation and pollution, we are beginning to recognise that our own present is our predecessors' empty and open future: their dreams, desires and discoveries, their imaginations, innovations and impositions, their creations. Our progress as well as our climate change, our colonial and contractual responsibilities as well as our global institutions, markets and corrupt financial systems are their empty, open, commodified futures in progress, are their creative imaginations working themselves out in and as our embodied and embedded present. Our war memorials are their political aspirations, their pursuit of ethnic cleansing. Our present was their uncertain future, where all that was solid melted into air, their discounted future, exploited commercially for the exclusive benefit of their present. We realize that we are the recipients of their empty-future illusion, which is for us inescapably real in its consequences.

Claims are being filed today for some of the results of their past pretences of emptiness. Accusations accumulate about past wilful blindness, for example, about asbestos, smoking and Thalidomide. Our predecessors' glorious creations rebound as nightmares. The costs have to be paid, the disasters rectified, the cancers endured. Successor recipients shoulder the burden, are required to forgive and remedy past follies and pretences. Yet, despite all this, we still hold on to the same illusion, still live the same make-believe: The future is empty and open, we say. Ideal and unreal, the future exists only in our minds. It is ours to forge and shape to will, ours to colonise with treasured belief systems and techno-scientific products of the mind, ours for the taking. As social scientists we are charged to address this illusion, take it out of the invisible domain of implicit, naturalised assumptions and raise it to a conscious level of understanding where it becomes available as subject for public debate. Difficulties arise, however, because the established conceptual tools that guide contemporary social science expertise on the future are no longer appropriate to the new task. That is to say, the future as fact does not yet have its accompanying expertise but still relies on theories and modes of inquiry that cannot access it.

A distinction which Bertrand de Jouvenel (1967: 3) discussed in his seminal book *The Art of Conjecture* allows us to see one of the key difficulties. De Jouvenel explains the difference between the Latin terms *facta* and *futura*. *Facta* refer to past events, done, achieved and completed; something that has already taken (unalterable) form. *Futura* in contrast, refers to that which has not yet come about, something that is still open to influence and will become a *factum* only after it has occurred. The distinction entails

the recognition that ,there are no past possibilities and there are no future facts’ (Brumbaugh 1966: 649 in Bell and Mau 1971: 9). The past is closed to influence and therefore open to factual knowledge while the future is open to choice and efforts to colonize and control, but closed to factual inquiry. De Jouvenel’s dichotomy stands like a motto above social science inquiry and it entails implicit assumptions about the reality status of the future that have become social science common sense. From this perspective, not ‘the future’ but only present possibilities for the future are real. Not *future presents* but only *present futures*, therefore, are amenable to contemporary inquiry. Since the future as *future present* is considered to lack reality status the conclusion is drawn that, therefore, the *future present* is an aspect of mind, belonging to the world of ideas, thus to the realm of the ideal rather than the real. In ancient times this would obviously have been deemed utter nonsense. With rise of science, however, the assumption that the future is unreal has become naturalised as taken-for-granted fact.

Yet, in today’s technologically driven world, impacts of present choices and actions stretch across time and space as futures in progress that may be latent across generations for hundreds, even thousands, of years. In such a context the idea that the future is non-factual, ideal and thus unreal is once more becoming untenable. Today we have to learn to recognize and accept that the latent process world of futures on their way and in the making is real even if it is not tangible or material in the conventional sense of materiality. If we want to encompass this futurity in social theory and the logic of social inquiry, then we need to find ways to accord material (thus factual) status to the intangible effecting world of processes. Furthermore, there is a need to embrace anew the idea of the pre-existing future. Unlike their ancient predestined counterpart, however, today’s pre-existing futures are largely the result of human action. They are not tied to single outcomes but dispersed across space time and matter. They are not determined, that is, not fully set in all their details but pre-existing never-the-less, albeit in fuzzy, undetermined and indeterminable ways<sup>3</sup>. This once more alters the temporal direction of the source of knowledge: in addition to *present futures* we have to re-engage with *future presents*.

Much more in our conceptual apparatus that we take for granted requires when we take seriously the idea of encompassing futurity in our social theories, frames of reference and logic of social inquiry. Some of this conceptual renewal reaches into the deep structure of modern (western) thought. The way we understand causality can serve as exemplar. The modern (scientific) concept of causality has a specific temporal direction: it works from past to present. As such, however, it is no longer adequate to encompass the temporality of futures in the making, latent and invisible but on their way nevertheless. Older understandings of causality, in contrast, encompassed both past and future. It may be helpful, therefore, to revisit one of these alternative ways of conceptualising causality.

Aristotle proposed that causality needs to be understood with reference to four interdependent elements. He called them ‘material’, ‘formal’, ‘effective’ and ‘final’ cause respectively<sup>4</sup>. Natural science unified the first three causes into one general physical cause where action causes subsequent effects in a linear fashion from past to

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<sup>3</sup> The studies of Rachel Carson 1965 and Theo Colborn et al. 1996 provide excellent examples of such time-space distantiated futures in progress.

<sup>4</sup> For a more detailed discussion, see Adam and Groves 2007.

present and future, while the idea of a ‘final cause’, as both for-ness and the goal or end (*telos*) towards which organisms develop, has been eliminated altogether. Biological scientists had difficulty with this eradication of final causes, given that they were encountering unmistakable forms of goal directedness in their subject matter. Acorns grow into oak trees (and not beech trees or dandelions), the final cause of the oak tree being encoded in the acorn, and vice versa. In order to eliminate all traces of the religious language of creation and predestination, biological scientists replaced ‘final causes’ with the a-temporal idea of ‘function’, that each part has a function within the whole. Thus, the *function* of a part brings about development, not its encoded pre-existing end. It is the acorn’s function, not its destiny, to become an oak tree. With this simple move the temporal has been reigned in and futurity effectively shielded out from scientific causality in biology. In its place, the past and the a-temporal present have been installed as the exclusive sources of scientific meaning. Sociologists and anthropologists will recognise the parallel move in the social sciences.

The pertinence of Aristotle’s ‘final cause’, however, relates to its materiality: final causes permeate the realm of matter. Future-oriented and future-creating knowledge practices have material effects that reverberate through the entire system of physical, biological and cultural relations and processes. Aristotle’s four causes, therefore, offer a base on which to start a contemporary conceptual reconstruction that is consistent with today’s impacts of knowledge practices which permeate outwards in space, spread inwards in matter, organisms and bodies and extend temporally into the future: tomorrow, one hundred, even one thousand years hence. The task for social theory, therefore, is to produce conceptualisations that are appropriate to contemporary future making and future taking in general and to the future as fact in particular. This entails, among other things, understanding that transcends the taken-for granted scientific conceptualisation of matter, facts and causes in order to encompass fore-ness and the real futurity of processes.

### **Reflections**

Fate, fortune, fiction and fact have been identified as historically different approaches to and assumptions about the future. Yet, the different perspectives and attendant knowledge practices did not replace each other but continue to co-exist, if in particular hierarchical relations. None of the earlier futures relations, for example, are lost. Thus, the future as fate continues to play a powerful role in understanding and decisions. In many domains of life and situations the future as fortune is still the dominant perspective. The assumption that we make our own futures and fortunes remains prevalent and belief in an empty future that is to be filled with our desires is as strong as ever, tempered only by the awareness that outcomes are not fully amenable to human design. For the social sciences this layeredness of futures relations makes investigation of that domain very complex indeed. Moreover, the changes happened so fast that social theory and our modes of inquiry have not caught up with the mutating knowledge practices. However, if sociologists are to play a central role in contemporary societies’ self understanding and if their investigations are to be appropriate to their contemporary condition, then they do need to engage with this difficult subject matter and get involved in conceptual revision. If we as sociologists and social theorists want to encompass not just *present futures* but *future presents* and if we want to acknowledge the reality status of futures in the making,

then we need to change our implicit assumptions and our modes of inquiry. To bridge the gap between daily life and the study of that life we need to take futurity seriously and encompass the complexity that such engagement entails. With futurity moved to the heart of the discipline, we can begin to critically support and, where necessary counterbalance, the innovative policies and activities that shape our world for contemporaries and untold generations of successors.

## References

- Adam, Barbara 1995. *Timewatch. The social analysis of time*. Cambridge: Polity Press; Williston, VT: Blackwell.
- Adam, Barbara 1998. *Timescapes of modernity. The environment and invisible hazards*. London/New York: Routledge.
- Adam, Barbara 2004. *Time*. Cambridge: Polity Press; Malden, MA: Polity Press.
- Adam, Barbara 2005 **PDF link to futures web Complexity paper**
- Adam, Barbara and Chris Groves 2007. *Future matters. Action, knowledge, ethics*. Leiden: Brill.
- Arendt, Hannah 1998/1958. *The human condition*. Chicago: Chicago University Press.
- Bell, Wendell 2003/1997. *Foundations of futures studies. History, purposes, and knowledge*. Two volumes. New Brunswick: Transaction Publishers.
- Bell, Wendell and James Mau eds. 1971. *The Sociology of the future: theory, cases, and annotated bibliography*. New York: Russell Sage Foundation.
- Bury, John B. 1955/1932. *The idea of progress. An inquiry into its growth and origin*. New York: Dover Publications Inc.
- Carson, Rachel 1965. *Silent spring*. London: Penguin.
- Colborn, Theo, **J. P. Meyers** and **D. Dumanoski**, 1996. *Our stolen future. How man-made chemicals are threatening our fertility, intelligence and survival*. Boston: Little, Brown & Company.
- Jouvenel, Bertrand de 1967. *The art of conjecture*. Trans. N. Lary, London: Weidenfeld and Nicolson.
- Littleton, **S. C.**, ed. 2002. *Mythology. The illustrated anthology of world myth and storytelling*. London: Duncan Baird.
- Luhmann, Niklas 1982. *The differentiation of society*. New York: Columbia University.
- Manuel, Frank. E. 1962. *The prophets of Paris*, Cambridge, Mass.: Harvard University Press.
- Marx, Karl and Friedrich Engels 1967/1848. *The Communist Manifesto*. Harmondsworth: Penguin.
- Nowotny, H. 1985. From future to extended present: time in social systems. In *Time preferences in interdisciplinary, theoretical and empirical approaches*, eds. G Kirsch, P. Nijkamp and K. Zimmermann, 1-21. Berlin: Wissenschaftszentrum.
- Nowotny, Helga 1994/1989. *Time: the modern and postmodern experience*. Trans. N. Plaice. Cambridge and Cambridge, MA: Polity.
- Peccei, Aurelio 1982 *One hundred pages for the future. Reflections of the President of the Club of Rome*. London: Futura.

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