

**Time and Higher Education Workshop
18-19 February 2009, Hendon Hall**

Changing Times: Fate, Fortune and Fiction¹

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Outline of Talk:

1. Introduction
2. Time & Future as Fate
3. Time & Future as Fortune
4. Time & Future as Fiction
5. Reflection

1. Introduction

In this introductory talk I would like to outline three historical ways of relating to and working with time and the future. The talk covers ancient ways where time belonged to gods and the future was understood as fate, industrial ways where time was fashioned to human design and used for wealth creation – this is time as fortune - and, finally, contemporary ways where time is experienced as shape shifting and futures are being created at an ever increasing rate so that established relations no longer work, with the effect that the time and future of the industrial period are becoming more fiction than fact. Underlying this division between fate, fortune and fiction is my argument that time is central to social life, that it is central to education and that it pervades every aspect of our existence in a complex and multi-layered way.

When the educational focus on time is broadened out one quickly becomes aware that Time is everywhere and it permeates everything: the cosmos, our solar system, the earth's past, present and future, our environment, our social life - both private and public, our education system, as well as every aspect of commerce, business and industry. Time is about life and death, growth and decay, origin and destiny. It is about our past, present and future: our evolution, history and memory, our perceptions, actions and decisions and our anticipations, plans, hopes and fears. If time is everything and everywhere, then what is it? We know that the clock tells us *the* time, but it does not tell us what time *is*. We live time. We experience time daily as an integral part of existence. We know time intimately. And yet, the answer to this simple question seems extraordinarily difficult.

This question was already put by Saint Augustine in the 4th Century AD, when, in conversation with God he asked:

‘What, then, is time? If no one asks me, I know; but if I want to explain it to a questioner, I do not know. Yet, I say with confidence that I know that, if nothing passed away, there would be no past time; if nothing were coming,

¹ The time part of this talk is primarily based on my 2004 book, Adam, B. *Time* (Polity Press) while the futures part draws on my most recent book Adam B. and Groves, C. 2007 *Future Matters. Action, Knowledge, Ethics* (Brill) and research conducted during an Economic and Science Research Council (ESRC) Professorial Fellowship (RES 051270049).

there would be no future time; and if nothing were existing, there would be no present time.’²

To answer this question is as difficult today as it has been then. Let me suggest here just two reasons: First, time forms an invisible part of our lives and, secondly, we know it at a tacit level, which means it is part of our implicit knowledge base.

Time, we appreciate, is not a thing but a process and, as a process, it is not accessible to the senses: we can’t see, touch, taste, hear or smell it. At the same time, however, we are able to experience it. We know that time has passed, for example, when a friend’s hair has gone grey or a Toddler has turned into a teenager. We know time by the passing of days and months and years. We experience it in the ageing of our own body. We feel it as time pressure when there is too much to do in a given time frame. We deal with it regularly in teaching plans and educational schedules. For every one of us it forms an integral part of your daily work experience and practice. At the wider social level time is our prime organising tool: with time we create, order, shape, and regulate the world we live in. And this has been the role of time since the dawn of humanity.

In our daily lives we weave in and out of all the different aspects of time without giving much thought to the matter, moving with ease through the different aspects associated with the cosmos, the body and social life in all its expressions. If we want to understand our approaches to time, and use time more effectively, however, we first need to make this implicitly-known aspect of our lives explicit: We need to bring it to the forefront of our consciousness and understanding, since only what we know in that explicit way can be used creatively and effectively for deliberate pedagogy, change and transformation. To help this process of making the invisible visible and render the implicit explicit I go back in history to show approaches to time that differed significantly from ours. This is a helpful strategy because the ‘otherness’ of past ways helps us to bring our own approaches to time and the future into sharp relief. However, to show you the larger picture means that my map of the special features of the three historical approaches is on a large scale and therefore inevitably lacks the historical detail that one would want to include in a different context.

2. Time & Future as Fate

Let me begin with a period when time belonged to gods and the future was in their hands: the period when the temporal realm is associated with fate. When we explore mythologies from across the world we find that all of them address the issue of time: How it emerged, who created it and whose rightful domain it is.

In Chinese mythology, for example, the sun god Shen Yi and the moon god Heng E are husband and wife, as yang and yin they symbolise the two complementary forces of the universe. Their daily task is the eternal ordering of time.

In the creation myth of ancient Persia finite time was created by infinite time. This infinite time is the source of all existence. Except for time all things are created. Time is the creator and time has no limit. It has always been and shall be for evermore.

² Augustine, Saint 1983/ 397-401AD, ‘Confessions XIII’, in Bourke, V. J. ed. *The Essential Augustine*. Indianapolis, Ind.: Hackett Publishing Company, p.229.

In contrast to the Persian creation myth, in the Christian religious tradition, God created the sun and moon, heaven and earth. The Christian God *is* time and is the creator of time on earth. Before God's creation there was no time.

What is shared across these diverse understandings of ancient and traditional cultures is the knowledge that time belongs to gods (or one God). In all these belief systems time the unknowable is projected into/unto sacred gods and their deeds. This means that gods rule the temporal domain, while people have dominion over space and matter only: People's time is in the hands of gods (or one God). Not people but gods make and determine the future. People's future is therefore pre-destined fate. And, as such, people's future pre-exists.

Experts on this pre-destined time have privileged access to the realm of gods and are skilled in prophesy & divination, which is an effort to know what god(s) and spirits have in store for individuals and collectives. These experts did not pursue the future in general but sought answers to specific questions about what was going to happen, in a certain situation, to a particular person. Their prophesies and divinations were to aid people's efforts to be prepared and ready for what was to be and come about. Often such expert skills were handed down through the generations. In some cases, such as the divination of futures by reading runes, sculls or the livers of certain animals, for example, the skills were highly specialised and required extensive training and practice.

In western cultures it was not until the Middle Ages that the belief that time is the exclusive dominion of gods (or one God) began to be abandoned in the move towards secularised modernity. Similarly, the belief that the future is pre-destined fate has been largely forsaken and replaced by the unquestioned assumption that the future is ours to make and shape. However, it is not quite correct to talk about this assumption and belief only in the past tense. From a western secular cultural tradition, the past tense is correct. But there remain numerous cultures for whom the understanding of time and the future as Fate is as relevant to day as it was in ancient times to almost everyone.

Before I move on to the second part of this talk - Time & Future as Fortune - I would just like to pick out some of the most salient points raised under the heading Time and Future as Fate. When extraterrestrials are thought to have created and owned the temporal realm time and the future are experienced as pre-destined fate. In such a context the future is assumed to be pre-existing. Specialist knowledge of this pre-determined future is not intended to aid intervention but to prepare people for their fate and pre-destination. As we shall see, each of these assumptions has been largely abandoned during modernity.

3. Time & Future as Fortune

The change from fate to fortune was complex and slow. How it progressed cannot be our focus here. As before, I want to present you with some key features of a large-scale map. And, once more, it is not the historical detail but the clarity of the distinguishing features that I wish to bring to your attention. Two important

developments that underpin the change from time as fate to time as fortune are calendars and clocks.

Calendar Time

Through the ages and across the world Calendar systems varied greatly. Their differences are not at issue here. What is important for us to appreciate here is that, despite a tremendous diversity in calendar systems, the social impact has been similar. The capacity to calculate and calibrate the rhythms of nature brings with it a number of key advantages: It provides predictability and with it the ability to plan ahead. It hugely increases the capacity for large-scale social synchronisation. And it dramatically enhances the capacity for social regulation and control. We can therefore say that knowledge of planetary patterns, sequences and durations served as basis for structuring and regulating social life.

Clock Time

With the development of clock time the diversity of approaches to time begins to narrow. As a time that is created to human design, clock-time has a number of characteristics that mark it off from all other forms of temporal expressions. I would like to identify just three of these defining features here. First, clock-time operates independently from context; unlike the times of nature, it works without recourse to planetary motion and thus seasonal rhythms and the dark-light cycles of day and night and it functions without recourse to the location of the observer and knower. As such it is applicable anywhere, anytime. Secondly, clock-time is invariable. Where variance is a key characteristic of the rhythmicity of nature, invariance is the mark of clock-time. Clock time replaces variable hours, which differed in length according to seasons, with invariable ones. One hour of clock time is the same irrespective of when and where you are: whether you are on the North Pole or in North London, during summer or winter, at night or during the day. In fact, for clock-time variance would mean the clock is going wrong. Thirdly, clock-time is a purely quantitative measure that measures time in spatial lengths: as a spatial measure, time becomes tangible. It is amenable to standardisation. And it allows for translation into other quantitative measures such as money.

This potential for translation of time into money and vice versa was soon to be applied in practice and began to permeate commonsense and socio-economic values: it included the belief that time is money which became accepted as self-evident truth. From this flowed the associated assumption that speed is connected to efficiency and profit, and this in turn is tied to the conviction that increased speed brings increased profit. However, increased profit was not the only outcome of the association of time with money and speed with profit: it appears that the general trend towards acceleration which followed these two associations had grave consequences for the predictabilities and certainties that emanated from the widespread social use of calendar and clock-time. I will return to this point shortly.

What we need to hold on to here is that, these three features – independence from context, invariability, and spatial quantitative measure - have provided the foundations for time to be used in ways that were unthinkable for cultures who related to time as fate. It made it possible for time and futures to be calculated and controlled. It could be structured and regulated. It meant time could be used and allocated; and it could be managed and controlled. Importantly, those features meant that time could

be commercially exploited and globalised. An example from shipping can illustrate the wider point.

Marine Chronometer

The first working marine chronometer was built by John Harrison in the middle of the 17th century. John Harrison dedicated his entire life to the development of this instrument. He embarked on the project in response to a call by Queen Anne who offered payment £ 10,000 for the first invention that established longitude within ½ a degree of accuracy, which is 30 nautical miles. This incredible amount of money was put up as reward for a very good reason. It was offered because up until Harrison's invention there was no way of keeping accurate time at sea. This proved a huge problem because, to navigate safely, you needed to know time in order to establish longitude because longitude & clock-time are measures that can be expressed on each other's terms: 1 hour of clock time is 15 degrees longitude. The battle for longitude, therefore, held the potential for control over the seas and it offered enormous commercial potential: to know accurate time at sea, and therefore longitude, turned exploratory adventures into calculable commercial enterprises. With accurate time-keeping at sea journeys became not only safer but more profitable because it became possible to calculate future profits for the estimated periods that ships spent at sea.

It took another 250 years for equivalent developments to take place with regard to travel on land. But by the beginning of the 20th century the variable hours, which changed with the season, are abandoned and Standard time is instituted across the world. Greenwich is established as the Zero Meridian (GMT). Longitude is set one hour apart in each direction, East and West and by 1913 the Eiffel Tower transmits the first global time signal: world time and the global present are established as both an organisational system and a value norm. Parallel changes occurred in approaches to the future some of which I would briefly like to identify.

The Future: from Gift to Resource

During modernity the future too was transformed from the gift of god(s) to human resource and from realm of fate to domain for knowledge and wealth creation. As with time, from the Middle Ages onwards, we can observe how the domain of providence slowly gives way to the pursuit of progress³. Similar to the changes in time, this entailed the transformation of the future from an individual, unique, predestined realm to an abstract and empty, quantifiable entity for use and exploitation. Futures are no longer merely expected but are now subject to planning & design, intervention & trade, engineering & management. Here the shift is from individual fate as future fact to probabilities calculated on the basis of past known facts. Insurers and financial traders became prime experts of this probabilistic future. But all of us engage on a daily basis in probability calculations even if we do not think of our future making in those terms.

Historically, this shift in perspective involved a crucial transformation from understanding the trade in futures as theft (i.e. the sin of usury, because the future did not belong to people but God(s)) to accepting it as an inescapable aspect of daily life, education and economic exchange, the latter of which covers such practices as

³ In addition to Adam 2004 and Adam and Groves 2007, see also Le Goff, J. 1980 *Time, Work and Culture during the Middle Ages*. University of Chicago Press.

banking (calculating the future with respect to interest for credit & debt), insurance (calculating the future with reference to risk), and financial ‘futures trading’ (calculating the future not with reference to goods but the promise of goods). What is important to appreciate here is that globally in many societies the traditional understanding of ownership is still held strongly and even in our own culture we find that the religious belief in providence sits alongside the belief in an empty future.

Despite this additional complexity, however, it is the empty future as realm of pure potential which proved central to much of the west’s affluence and global dominance. But it was also fundamentally implicated in some of our most difficult, long-term problems, such as climate change (as I show in some of my recent books⁴) and, of course, in the current global financial crisis. Moreover, it is precisely this emptiness and openness, in conjunction with the pursuit of progress, which has vastly increased social insecurity and uncertainty. This means that the competence in futurity, which had been achieved to a high degree by traditional societies, is not matched by today’s approaches to the future because the highly prized progress and the associated pursuit of innovation & change are accompanied by this inevitable rise in uncertainty and loss of control.

Some of the salient points from this second part of the presentation on Time and Future as Fortune are as follows: with the change in ownership from gods to people the temporal realm was transformed from domain of fate to realm of action and potential. Time was created to human design and the future became ours to make, take and shape. Abstract time and the empty future are treated as resources to be planned & designed, traded & exchanged, managed and controlled. This means the temporal realm becomes a source of wealth creation: it is associated with fortune. Importantly, traditional approaches remain alongside the new ones and are positioned according to context and power relations. Expert knowledge of the temporal realm is no longer about the forewarning of an impending fate, instead, it becomes a tool for action, intervention and social engineering on the one hand and an aid to progress and innovation on the other. The dual move towards wealth creation and progress is, in turn, tied up with the general speeding up of social and economic processes on the one hand and with greater interdependencies on the other, both of which reduce certainty and predictability. In this new context, time and the future are beginning to lose their tangibility and start to be experienced as fiction.

4. Time and Future as Fiction

There can be no question that the shift from fate to fortune brought with it tremendous advantages: it aided the understanding of our world and the development of science. It has underpinned the advances in knowledge and progress. It facilitated western control and colonization and it has been invaluable for wealth creation. At the same time, however, the abstract mode of knowing has turned out to be a disadvantage for achieving intended change and desired outcomes because the outcomes and products of the abstracting, quantifying mode of knowing sit uneasily in the interconnected, interdependent temporal world of social and ecological processes. Or, to put it differently, when products conceived in the abstract mode are inserted into the give-

⁴ See Adam, B. 1998 *Timescapes of Modernity. The Environment and Invisible Hazards*. Routledge; as well as Adam and Groves 2007 *ibid*.

and-take world of processes, they are bound to produce unintended and unwanted consequences. This, however, is not yet what I mean by time as fiction. Time as fiction, I want to relate primarily to high-speed networked processes.

ICT

Information and Communication Technology will serve to illustrate the shift from time as source of fortune to its status as fiction. ICT is helpful because with its development arises a very distinct temporality. Again, it is not the detail but the key features I seek to bring out so that we may see clearly the differences to earlier temporalities.

With web-based ICT, it takes virtually no time for information to move across space. This means that information is not just transferred instantaneously in time but is stretched in web-like fashion simultaneously across space. In such a context both space and time lose their established qualities and we need to learn to relate to them in new ways. Importantly, this instantaneity and simultaneity of information transfer operates in a context where bodies continue to require time as they move across space and where other forms of communication, such as face-to face, telephone or e-mail communications continue to operate between two predefined points. What then are the implications of the instantaneity and simultaneity of networked communication operating at near the speed of light?

First, where the link between *speed, efficiency & profit* is concerned we need to understand that this system of wealth creation ***reached its limits*** with *networked communications and transactions* at or near the *speed of light*. We need to appreciate that once you have reached the speed of light there can be no further acceleration which means that there can be No further competitive advantage from speeding up, thus, no further gains in efficiency. Secondly, there are no longer any stretches of time and time gaps which can be exploited for individual advantage or wealth creation. When duration has been reduced to zero and chronology becomes irrelevant there is no longer a duration for deliberative intervention, and there is no longer any temporal space for the calculation of opportunity costs. Thirdly, networked instantaneity places the whole idea of working with time in jeopardy because time has lost its characteristic as a quantitative measure: there is no longer any time quantity to be measured, regulated, managed, sold & controlled, and there are no longer any traceable causal links and chains in which to insert deliberate action for change. In the temporal context of instantaneity and simultaneity there are no longer predictable outcomes because these were dependent on the key features that characterised time as fortune. As the same time, however, chronology & clock time continue to be the wider context in which those new temporal relations are formed: bodies & objects continue to take time as they move across space. The expectation of time and future as sources and resources for wealth creation continues to dominate practices and expectations, so that assumptions and expectations are at odds with ICT practices and their effects. Moreover, contradictions & problems arising from the earlier imposition of the industrial time logic on pre-industrial socio-environmental relations continue to drive the economic, environmental, educational and political agenda.

As fault lines between the spatial time of the clock and the time-less time of ICT are becoming exposed, the taken-for-granted assumptions about time are becoming

apparent and begin to lose some of their invisibility. This rising awareness of what we normally take for granted is crucial for finding new openings for change, since, as I said earlier, only what is at conscious level of understanding is amenable to deliberate intervention and pedagogy. Difficulties arise, however, because the established conceptual tools that guide the way we approach time and the future are no longer appropriate to the new task.

Writing about modernity as Liquid Modernity, Zygmunt Bauman has introduced a useful imagery that draws attention to the difference between solid and liquid states, which he distinguishes along the following lines⁵: solids can hold their shape and after stress spring back to their original shape. They are cast once and for all. Molecules of solids are bonded and this bonding gives solids the resistance against the separation of its atoms. For solids the important dimension is the space they occupy. In contrast, liquids cannot hold their shape. To keep them in shape requires a lot of attention and effort, constant vigilance, and high energy input. Liquids cannot resist other forces and are in constant change. At the same time, they are not easily stopped as they simply pass round obstacles and dissolve others. Meeting solids leaves them unchanged, while the solids in that encounter are often changed in the process. Importantly, liquids travel easily and lightly. For liquids time is the important dimension.

5. Reflection

On reflection, we can make a connection here to the changes I have identified in the shift from social time as fortune to fiction. The instantaneity and simultaneity of ICT has dissolved much of what was previously thought of as solid social structures and it provided for some, in particular circumstances, great freedom and speed of movement. In light of these developments, value norms have changed so that, today, not solidity but lightness, is cherished. Not stability and predictability but mobility and portability are pursued and progress is defined not in relation to durability but with reference to transience and the speed of circulation. What is cherished therefore are the qualities not of solids but of liquids.

However, as I have also shown, we must not think about our contemporary condition in dualistic terms: nothing just liquidizes. Nothing just disappears. Nothing is simply replaced. Instead, the old tends to feature in the new. Old systems interpenetrate new ones and vice versa but are likely to change their form in the process. Along the way, some parts may be rendered invisible and others inoperable. Some processes operate at the speed of light and are connected in instantaneous and simultaneous networks of information exchange, while others are conducted on the basis of clock-time and others still operate at the level of embodied time. Clock-time based social and educational relations & expectations, therefore, operate in contexts of both: in the pre-clock time of rhythmicity, finitude & change on the one hand and the post-clock time communication at speed of light on the other.

Importantly, it is not a case of choosing one mode over another but knowing them in relation to each other. This means understanding, for example, the importance of

⁵ For excellent work on the liquid quality of modernity see the work of Zygmunt Baumann, in particular Baumann, Z. 2000 *Liquid Modernity*. Polity Press.

lightness in a context of solid foundations where the material and social aspects are also embedded in the rhythms of nature and planetary motion. It means letting go of either-or, and before-and-after explanations and to facilitate instead an understanding that encompasses contradictions and paradoxes, multiplicities and complex implications, displacements & repressions and the resonances of the old in the new.

When you apply the analysis and associated insights to your *own* work, you may, of course, draw different conclusions, raise different issues, find other associations and linkages. No matter how you apply it, however, the time-based analysis will unquestionably impact on your ontology, on your pedagogy, and your epistemology. I hope that my introductory talk has helped to set this process in motion.

Biographical Note

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