In and Out of Time

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ABSTRACT: This paper explores the nature of time and its relation to our concerns for the future. It is shown how a new sense of time, chronological time, emerged with the rise of science and modernity. This now familiar time is rarely questioned. Yet, it is argued, this time is intimately bound up with our contemporary problems and our failure to effect solutions.

In analysing chronological time it is revealed that the future is devoid of reality in it. This absence of a real sense of the future explains our careless despoiling of the environment. To save our environment we need to resurrect a real sense for the future: only then can the future be truly valued. This means rediscovering another sense of time. This other time is named *kairological time*. In kairological time there is a more vivid awareness of the future. In this time, too, new ways of acting for the future are opened up. Possibilities for a wiser way to the future in part stem from a revaluation of the past. So the sense of being out of time to save ourselves and our planet can be overcome by a living in this other time, kairological time.

KEYWORDS: Time, future, philosophy of technology, history of time, history of science

The tolling bell
Measures time not our time, rung by the unhurried
Ground swell, a time
Older than the time of chronometers, older
Than time counted by anxious worried women
Lying awake, calculating the future....

T.S.Eliot *The Dry Salvages*

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OUR TIME

What makes living in Britain today so different from the life lived by our ancestors? The presence of modern conveniences, central heating, television, cars and the like? Or do our worries rather than our achievements distinguish us? Is it the novelty of our concerns such as ozone depletion, nuclear disasters, and poisoned seas that mark us out? The progress and pollution associated with modern technology do distinguish us, but the key difference, I shall argue, is neither of these although it is intimately linked to them. The crucial difference is, quite simply, that today we live in a different time from the time in which the pre-modern citizen dwelt.

This is not a tautology. I write in a different time, not at a different time. Perhaps, as I shall try to explain, I could say that the difference is that while a medieval man lived in time we of the present age live for the most part out of time. And if we live out of time we cannot hope to be in time to save the fish shoals, the rainforests, the ozone layer; never be in time to secure our planet, our home.

What I shall suggest is that the rise of modern science and technology has associated with it, not just conveniences, curses and catastrophes, but also, and more radically, a new and tragically impoverished comprehension of time. Modernity is marked by a loss of a proper sense of time, and thus we can be said to live 'out' of time.

This loss of sensitivity has been remarked by others who have recognised that without it we are temporally disoriented. Blind to time's signposts they fear that we can only drift towards the chaos, perhaps apocalypse, of the post-modern future. How can we protect the future? By '...what insight or value knowledge shall [we] represent the future in the present?' the philosopher Hans Jonas asks. His plaintive response to his own question is a confession: '...here is where I get stuck, and where we all get stuck' (Jonas, 1974, p.19). Stuck like the US Nuclear Regulatory Commission who, while aware of the 'inter-generational', long-term risks associated with nuclear power, could not '"...suggest a good way to handle the issue in a safety-goal context." So they ignored it.' (Perrow, 1984, p.69)

Rather than ignore the future (surely an unwise policy), other critics of modernity have suggested that to face the future we must first learn to face the past. Both Giedion (1948, p.vi) and Marcuse (1968, pp.86-8) hankered for a revival of 'historical consciousness'. But what is there to revive of the past in a culture 'hostile to tradition'? (Rapp, 1981, p.183.) Instead of looking to the (historical) past, or bemoaning the mystery of the future, I shall suggest that a more radical consideration of time itself is required.

Well, what is time? This is a notoriously perplexing question. As St Augustine said of it, 'If no one asks of me I know [what time is], if I wish to explain to him who asks, I know not.' Most of us, however, never ask or get asked. We do learn to tell the time early in our childhood, yet we do not study time itself. Indeed, the very ease with which we can tell the time disinclines us to question time. The watch is familiar and it appears accurate. 'But,' as Heidegger

remarked, 'time cannot be found anywhere in the watch that indicates time, neither on the dial nor in the mechanism, nor can it be found in modern technological chronometers. The assertion forces itself upon us: the more technological – the more exact and informative – the chronometer, the less occasion to give thought first of all to time's peculiar character.' (Heidegger, 1972, p.11).

Technology can tell us the time, but not what time is. Rather, if we wish to give thought to time itself we should begin, as perhaps Augustine hints, with ourselves. The answer to the question of time is available if we can articulate our own, usually silent understanding, and we surely have an understanding based on a lifetime's experience of time. Once we have set out what time means to us then we will be in a position to comprehend how our meaning differs from that of our predecessors and so discover that they did indeed live in a different time. We will then also be able to appreciate that their time is a time we may wish, perhaps must recover for ourselves if we are to have a future.

So, what do we know about time? Time, we know, has three aspects: the past, the present, and the future. If we explore each of these faces of time then we can advance quite some way toward understanding time as a whole.

OTHER TIMES – TIME PAST AND TIME FUTURE

To begin at the beginning seems to mean first attending to the past. But need much be remarked of the past today? 'History is bunk', Henry Ford is reputed to have said, and he seems correct. Our past disappears rapidly into irrelevance. In a world which is changing so swiftly, last year is long ago. Its fads and fashions are already quaint. The past is behind us and need not be remembered because there is little it can teach us who live in a world far removed from it. But though it need not be remembered we may nevertheless like, or even need, to be reminded of it occasionally. It can be trawled for entertainment or plundered by politicians for propaganda. Amusing yet tragic, and largely useless except as an affirmation for authority and progress: this is our past today.[1]

We are, it seems, more rightly concerned with the future. We are constantly planning and preparing for tomorrow, the tomorrow which will be better than today. Tomorrow, next year, very soon there will be jobs for everyone, clean air in our cities, safe fusion energy, a cure for AIDS. But forward looking as we are we do not look far forward. Forecasts and plans are for the next year or so generally, rarely longer.[2] Remarkably little preparation is made for a generation, century or further ahead. So problems like the greenhouse effect, desertification, the hazard of nuclear waste, are ignored because their consequences will be experienced well beyond any normal planning horizon.

We are closely circumscribed by our temporal boundaries; the limits of past and future are only years away. And this narrowness of time's frame is peculiar to us. In times past time stretched much further: back, back to an ancestral past

honoured in the present, and forward through generation upon generation to a future whose approach informed present conduct. Storytellers retold ancient stories as if they had been witness to the events they vividly recounted. Medieval cathedral builders embarked on their tasks knowing they could take a century to complete; the Chinese took a millennium to dig the Yun-Ho Canal. What project today in the era of high technology has a span of more than a decade?

So other people saw and acted further into time it seems. That is one difference between their time and ours. Another is the direction to which they gave most attention. Whereas our principal concern is the future (however foreshortened), theirs was the past. So although primitive people had (and still have, anthropologists report) a more genuine concern for the future than we display, this was not their main concern. It was their past, their origins, their mythologies that chiefly interested them.[3] Why time is so confined for us, and why we face the future where others face the past are questions which we will soon be able to answer, but for now we have still to consider the present.

THE PRESENT

Hemmed in by the past and future as we are, it might be imagined that the present would be our privileged sanctuary. Now, the present is where we live if we live at all. Yet we tend to feel ill at ease with the present. We are inclined to describe it in terms of failings and absences: watch the news and note how many reports can be so categorised. When the news is not about what is wrong or what is missing today then it is often about the prospects of a better tomorrow. So if we are not actually recoiling from the unpleasant present, we are being drawn by our dreams and schemes away from it.[4] We are not fully present when our minds wander to the possibilities the weekend might offer, or when we find ourselves wondering what is on the television tonight. Nor are we with the centre of our presence, literally not con-centrating, when we lose ourselves in recollections or regrets, yet we also often indulge our memories. The present escapes us when we escape to thoughts of what was yesterday or what may be tomorrow. So if there is no time like the present then we are in this sense out of time much of the time.[5]

We are also out of time in a more conventional sense: too often we find we do not have time. Time commonly harasses us. There is not time to do all we wish or have to do. Time is pressing; time is money; time runs out and we are out of time. We can seem to be engaged in desperate, endless races against time. So our endeavours are frequently directed toward doing things faster or having things more immediately. Is this not much of what we mean by progress, this speeding things up, striving for the instantly available, and packing more into the time available? And so, too, we demand near immediate satisfaction: instant replays, heat at the touch of a button, meals in a moment from the microwave, FAX communication. We want what we want now.

Here is revealed one of the characteristic paradoxes of our achievements and our lives: progress has enabled us to do more, more quickly every day and yet we remain more pressed for time than ever. How can this be? Well, the answer is also showing itself. If we could simply be content with speeding existing tasks then we might save time, but we are not. Our more fundamental wish is to cram more into the interval, and we can never rest content because our eyes are on the future. It is not enough to do better than yesterday, our anxiety arises because we are measuring our actions against the imagined achievements of tomorrow. We can never expect to overhaul tomorrow and so we are inconsolable. We are doomed to be forever running out of time.

KNOWING THE TIME

Is it not peculiar, though, to be out of time when we have greater command of time than ever? Clocks are more accurate and more available to us than to any previous generation. Is the fact that we know the time most of the time somehow related to the stresses time imposes upon us? It is. To understand this we need to consider how we know the time. In doing so we shall see that perhaps we do not know the time as well as we imagine, and yet how we actually imagine time can explain the paradoxes and problems time presents for us.

We think we know the time because of our ubiquitous access to chronometers. Few of us live without a watch, its quartz governed accuracy a fact of life which we assume. So if I say, meet me at two, and you show up at quarter past the unavailability or unreliability of a timepiece will be a poor excuse. Our chronometers enable us to control time so that we can coordinate and orchestrate all manner of human and physical activities. Indeed, without such control our society and culture would utterly collapse. Science since Galileo rests on the measurement of activities and events against measurable time. Likewise, commerce and industry, railways and airlines, schools and hospitals, television and sport..., in short, all the institutions of our modern civilisation are contingent upon time measurement and coordination. Small wonder, then, that Lewis Mumford, the eminent historian of technology and its role in our culture, designated the clock (rather than the steam engine, for example) as the most critical invention for our civilisation (Mumford, 1934, p.24).

The very pervasiveness and omnipresence of chronometers in our civilisation does mean that we barely remark them, so that it does require someone like Mumford to draw our attention to their essential role. And once we recognise their vital functions then it becomes very difficult to imagine how life could be possible without their aid. Yet in the history of this world there have been scores of other civilisations, and none of them possessed chronometers. Primitive timepieces, such as the sundial or a clepsydra, did not measure time as our clocks do, and so are misrepresented if described as a chronometer.[6] So a chronometric

clock is evidently not a prerequisite for culture, nor even necessary for keeping an appointment. What is necessary is a sense of time as the anthropologist Hugh Brody discovered while living amongst the Beaver Indians of British Columbia.

Brody was invited to join a hunting party one day. After a short trek the party split up into individuals or pairs for the morning's hunt, agreeing to meet again for the midday meal at a particular fishing spot. Brody writes: 'No time had been appointed for a rendezvous. Indeed clock time is of no significance here.... Everyone nevertheless appeared from the woods and converged on the fishing spot within minutes of one another.' He concludes: 'This coordination of activities is not easily understood....'.[7]

The Indians' uncanny sense of time (which Brody witnessed often) is a mystery to the wearer of the watch. Brody has a watch, a gadget, a prosthetic device, but what Brody patently does not have is an unmediated, direct experience of time itself. The Indians do: they live in time where Brody lives out of it. Our ubiquitous possession of clocks not only blinds us to our dependence upon them, it also disguises our exit from time. We have robbed ourselves of our sixth sense and robbed ourselves of the sense of the robbery; we have banished ourselves from time and never sensed our exile. Can we recover our loss, can we be re-admitted to time? Perhaps, if we can discover our deprivation. So we need to reveal more of our loss, and hint something of the possibilities available to us. This we can do by setting down the character of time itself, or rather, the contrasting character of two times: the time with which we are familiar, and the time which baffled Hugh Brody.

TWO TIMES

The time by which we live via our clocks is chronological time. It is the time Galileo elaborated and which was so firmly established by Newton. It is a time comprised of intervals (or durations). Its intervals are standardised and regularised: an hour is an hour is an hour wherever and whenever. So although we say that a day is made up of 12 hours of daytime and 12 hours of night-time we know this is loose talk. We realise that daytime can vary between eight and sixteen hours depending on the time of year, and that during our mid-winter gloom the inhabitants of the antipodes are enjoying longer hours of sunshine. The number of daytime hours may vary, but the hour itself, this cardinal interval, remains an hour, in summer and winter, in Britain and New Zealand.[8]

For us governed by chronological time this is simply common sense, and so we can only be bemused by the achievement of both the ancient Egyptians and Romans in devising waterclocks that always registered twelve hours of daytime, throughout the year. The intricate mechanisms shortened (by our measure) daytime hours in the Winter and lengthened them in Summer and so achieved a twelve hour day every day. Thus if a citizen of one of those civilisations had

recorded an event, such as a sacrifice, as happening at three hours after midday we would want to know what day of the year the event occurred in order to fix it in chronological time.[9]

How can we explain the trouble the Egyptians put themselves to by insisting on a twelve hour day? Why could they not appreciate the advantages of standardising the hour? The answer is that their ingenious waterclocks indicated a distinctly different time from the one we take for granted. Their clocks were attuned, not to chronological, but to *kairological time*. Kairological time is a radically different time. Kairological time is the time the Greeks knew to be the time for humankind,[10] and it is the time in which the Beaver Indians hunt, the time in which citizens of all other cultures live (or lived) out their lives.

Kairological time is a time of opportunities and events. It is the time of right times, the right times for things to happen. And although our sense of it is atrophied we still possess some appreciation of its meaning. If we feel a hunger coming on and consequently announce, 'It is time for lunch', we refer to a kairological time. By contrast if we declare, as we more commonly do, 'It is one o'clock, lunchtime,' we are responding to an imperative of chronological time: the clock determines the activity.[11]

If we now attend more closely to early, primitive clocks we can recognise that they responded to kairological time. The Egyptian waterclock mirrored events: the sun a quarter of the way across the heavens was indicated by one quarter of the twelve hour day. The early mechanical clocks of the medieval monasteries were also not chronometers. These clocks too marked events, the right time for something to occur, rather than recording the passage of time. The monastic clock signalled, for example, the time to ring the bell to summon the brethren to Vespers, not that it was three hours after midday. Such clocks could not be inaccurate, fast or slow. The absence of the minute hand from them was no loss. Though perhaps suggesting the possibility, it was the subsequent advent of scientific thought that wrought the revolution in time, not (as Mumford has suggested) these monastery clocks.[12]

The passage of time is very different between chronological and kairological time. We are familiar with the notion that time flows from past to future. This is how we regard the elapsing of chronological time: three o'clock is three hours after midday, for example, and three hours before six o'clock. Life, like a story, has a beginning in the past, a middle now, and an end somewhere in the future. Always activities unfold, from a past origin. But in contradistinction kairological time appears to move in the opposite direction. In it future times come toward us, then we experience them, and finally they recede from us into the reaches of the past. In the morning lunchtime approaches; midday we eat; in the evening lunch withdraws into dimming memory. Always events emerge, from a futural source.

This account of the movements of time is incomplete, if not misleading, because we are not fully present in it. Once we include ourselves properly then further critical distinctions come to light and we recognise that time does not

always move. We will now see that in chronological time it is we who are in motion while time stands still, whereas in kairological time the roles are reversed as it were. And while in chronological time one faces the future, the kairological citizen faces the past.

Chronologically time is an unmoving axis. It comprises an infinite series of fixed points. Thus, to take an arbitrary example, 10 a.m. on 1 May 1993 remains where it always was and always will be, one minute after 9.59 a.m. on that day, twenty four hours before 10 a.m. on 2 May 1993, etc. It is we who are in motion: mounted on time's arrow we travel relentlessly along this temporal highway in which dates are the milestones and clocks the mileometers. But kairologically we are stationary. We are fixed in the present for this is the only place we can be; all we can ever experience is what is happening now. It is the happenings which flow. They approach toward us out of the future; pass through us, and so present themselves in the present, and then slip away into the past leaving behind their traces in our changed presence. Lunchtime comes, is enjoyed, and departs leaving me no longer hungry, but satiated, and enriched by the conversation the meal encouraged.

Living by chronological time we need to face forward in order to see where we are going. Some glances backward can help, but only in so far as the recent past is a mirror to the future. By extrapolating past experience, past journeying, we can predict where we are heading. So forecasting based on last year's statistics are valued as providing maps of the future. But even better, since it is we who are travelling we can hope to control our steed, time's arrow, and direct our progress forward. We can determine the future, we can plan.

Today forecasting and planning are so common that it is difficult to appreciate their relative novelty. In kairological time planning is inconceivable. Those dwelling in kairological time cannot determine in advance the right time to do this or that. They await the unknown future and prepare to respond to it. Response is vital, since the kairological future delivers, not a pre-determined, fully-formed present, but opportunities and challenges. It is the human response to the possibilities which emerge from the future that actually yield the present. So as Hahn expresses it, '... *kairos*-thinking ... counteracts the danger of fatalism ...' (1976, p.834).

An important part of this preparation involves acquiring the wisdom to be gleaned from the lessons of the past. As a trivial example, we know that always in the past winters have been cold, therefore it is prudent to be prepared for cold in the winter that approaches. More profoundly, the past offers paradigms of how to be prepared. The paradigms emerge through re-collection of founding myths, tales of tragedy and stories of success, and accounts of the achievements our ancestors have entrusted to posterity. They can teach us how to comport ourselves in the present and how to compose ourselves for the future.[13] In summary, living in kairological time requires an openness to both past and future if the potential of the present is to be properly realised.[14]

Now we can understand why anthropologists have discovered that in other cultures people are concerned primarily with the past in distinction to our focus on the future. We can also see why in so far as we have a real concern with the past it is only for the recent past. We view the past pragmatically as the predictor of the future, so that in a changing world the past of more than a decade ago is largely irrelevant. By contrast, kairologically the value of wisdom and experience remains eternally present, so that no past, however remote, ever ceases to be of interest.

As for the future it can never be very far away from us because we recognise inherent limitations in our techniques of prediction, and in our powers to plan ahead. So our future is short. Though the future lies behind the citizens of a kairological culture, and so hidden from view, it stretches to eternity. Looking to the past they know that the presence of this generation has been contingent on the responsible actions of each and every prior generation, and so know of their responsibility to the countless generations coming. Thus it is that their temporal horizons are virtually boundless, where ours are extremely confined.

Actually our future is even more limited than we might imagine or than I have so far suggested. Bluntly put, there is no chronological future, and because there is no future there is no future to worry about. In coming to understand how the future has vanished we will also see how we have corrupted the present, why the present harasses us, and why, finally, it can be said that in accepting the governance of chronological time we live out of time. To gain this understanding we need to uncover more of the nature of chronological time.

THE OPPORTUNITY AND THE COST OF CHRONOLOGICAL TIME

What is the reality of chronological time? It is an axis, we have remarked, a series of points. How are these points distinguished? Well, this point corresponds to 9.59 a.m. on 1 May 1993, while this is 10 a.m. on the same day: in short the points refer to different times. We are in danger of travelling around a tautological circle here; it is difficult to discover a feature which distinguishes these points which does not depend on the fact that we have agreed in advance that they simply are different. In fact, we will not find a distinguishing feature, because there is none.

That we name this point 9.59 a.m. on a particular day is more or less arbitrary. If we in Britain harmonised our clocks with the continent, it would be 10.59 on 1 May. If Bristol had given the world mean time instead of Greenwich it would be 9.49. Why 1 May not 31 April? Why 1993? The number of years which have elapsed since the event to which this date refers is a topic of dispute amongst chronologists. This point does not announce itself as 9.59 on 1 May 1993, it is we who name it as such. Its name is an added, accidental feature and so we are free to rename it if we wish. Of itself it has no intrinsic quality which

distinguishes it from any other point on the axis of chronological time. It is quite featureless.

Chronological time is not completely devoid of character, however. Intervals of chronological time have some meaning. An hour may be an hour whenever and wherever, but two hours are twice as long as one. Intervals serve as measures of duration and have significance as such. And so the interval is the only inherent feature of chronological time (and then only when compared with other intervals). This is the impoverished reality of chronological time, and because this is all it can offer us we hold the interval in great esteem. This is why we are fascinated by records. We want to pack ever more into a given interval: more output, quicker journeys, faster meals. So it is that speed and the striving for the instant are two of the great goals in our culture. And of course, the work of our culture's experts (scientists, engineers, economists, sociologists, doctors) revolves around the gathering of activities and events within the hallowed intervals as data.

In creating records concerning intervals we also imbue them with their own particular character (e.g. 'May was the wettest May since records began'). We can also create character by introducing a novel feature rather than recording more or less of an already noted one. So first, different and new are important features which are reflected in adverts and in the content of the news (sic). Whether the round tea bag yields better tea than the square one is a moot point, but being different and new its producer could easily sell it. However, the search for novelty combined with the need for more and faster of what we have contributes to the stress which gives our time its true character, the stress which helps explain why we opt out of the present for the nostalgia of an easier going past or the dream of a more restful tomorrow.

But the barrenness of chronological time has conferred us with opportunity also. Devoid of feature we are free to erect our own landscape upon it. The opportunity offered is much more than the ability to arbitrarily name times and dates. We can add any feature we wish to any moment of this otherwise featureless, homogenous time. Thus, for example, we need not accept that midnight on 21 December must be cold and dark, and a time for rest as the kairological citizen should. We can have light and heat 24 hours a day, every day of the year. Factories can operate around the clock; entertainment via television can be available instantly every moment of the day. We can enjoy ice in June and strawberries in December if we wish. In July we can ski on the glaciers of Austria, in January we can bask on the beaches of Tenerife. And, of course, holidays are not holy (kairological) days but taken, when we or others determine, and taken to recover from the fury of work.

We can, then, in chronological time set down the features of the temporal landscape where we wish. But more, these features are themselves not concrete in form, as they must appear in kairological time, but plastic. We can mould them, shrink or stretch them as it suits us. So with a microwave oven, for

example, we can contract cooking time, while with the deep freeze we can elongate the durability of our foods. Medical research is dedicated to lengthening lifespan.[15] Industrial engineers seek ways of making work more efficient by reducing the times of individual work processes, and by coordinating the combination of processes by ever stricter 'control' of time, through 'JIT', Just-In-Time techniques, for example.[16]

The gains that barren time enable are bought at a terrible cost, a cost over and above the costs already remarked. The ultimate, dreadful effect of succumbing to the temptation of chronological time is the loss of the future. And I do not merely mean that we have forfeited our future through our acceptance of the risks of nuclear power, our tearing of a hole in the ozone layer or by our fouling of the oceans. I mean simply, though profoundly, that there is no future for the chronological citizen.

In kairological time the future certainly exists even if it is strictly unknowable. It is an unknowable but it is an ever approaching reality. Flowing toward the kairological dweller are happenings mundane and significant but always real: lunch, the next harvest, new generation(s), death. The when and the how of this future are not subject to predetermination, although the essentiality of approaching events demands preparatory responses now. By radical contrast, and notwithstanding the proliferation of plans and forecasts, the chronological future can have no reality, no being.

How could it since (in common with all chronological time) it lacks any intrinsic feature. Tomorrow can only come to have extrinsic, added on features when we travel by it. Certainly we can today predict that tomorrow we will have strawberries for tea, that unemployment will fall, that the rivers will be cleaner, etc., but how tomorrow will actually be we cannot today describe. Ironically, for all that we devalue them in chronological time only the past (yesterday the rivers were cleaner) and the present (today we are eating strawberries) have a reality, the reality we endow on our temporal journey. Because we have not yet reached the future we cannot yet imbue it with reality, and without us it is not simply empty, it is nothing.

Our hopes and dreams, our fears and anxieties, our forecasts and plans disguise this profound absence of the future, but our actions do betray this grim truth. Our carelessness, the carelessness with which we guzzle oil, dump our wastes, and produce chemical, biological and nuclear poisons believed to remain toxic for millennia for example, happens because we are actually acting in the implicit belief that there is no future to care about. We cannot rob or despoil what does not exist. And, as already suggested, what we do not do displays the future's absence also: we do not plan for generations to come, nor involve ourselves in projects that could take centuries to complete. The lack of resolve and procrastination by governments when confronted with the demonstrable ecological dangers of their own industrial, military and transport policies arises from the same absence of a real belief in the future.

To act in the present for the future the future has to be present for us, and this it cannot be in chronological time. To care for the future there must first be a future for which to care. Thus, for example, seeking a way to plug the ozone hole in order to safeguard the future is actually to put the cart before the horse. The primary task is to retrieve or resurrect the future. Once there is a future then there can be right actions performed for it in the present. Because the resurrection of the future requires the re-instatement of kairological time, the time in which we can be present to the future even as we concentrate on the present and attend to the past. In kairological time the future is not predicted or planned, but can be prepared for.

GETTING BACK IN TIME FOR THE FUTURE

I have highlighted the difference between the living out of time which characterises our time and the living in time of other cultures in order to clarify the distinction between them. But the boundary between us and them is not as sharp or absolute as I have sometimes appeared to suggest. We do still possess some sense, however atrophied and devalued, of kairological time, and this vestige is a seed of hope. 'Christmas is coming', we still say. Parents care for the future in caring for their children (even if this care may be compromised by adult acceptance of microwaves, videos and nuclear power, for example). We are not wholly divorced from the rhythms of the daily, weekly and annual cycles. And our language continues to convey to us the kairological meaning of time: perhaps we can learn to listen to its teaching. 'The future' derives from a Latin word meaning coming, a sense more clearly revealed in the French *a-venir*, and the German *Zu-kunft*[17] or the Dutch *toe-komst*: the future is coming to us; we are not going to it.[18]

Cultivating our atrophied sensibility would requires faith, concentration and imagination. We would need faith to forsake chronometers, forecasts and our dependency on the plethora of modern technology. We would need to cultivate concentration on the present where we are present, being in time, instead of wandering away out of time to fantasies set in the past or future: it is a concentration we occasionally experience when we are deeply absorbed in a pleasurable task, so we know we have a capacity to dwell in the present. And imagination because this is the mysterious and misunderstood faculty by which we can sense the messages of time. In particular it is not rationally derived plans which can inform us how to prepare for the future, but imaginative hearkening to the guidance the approaching future itself offers to us which can lead us to the fitting response to its call.[19]

The need by the future of us is a real, not an imagined one. So those who have heard its rumblings have done well to broadcast them. Now we should foster our latent sensibility, and sharpen our hearing so that we can presently act wisely and

not unwittingly imitate the reckless errors of the recent past. This, I have argued, means getting back into kairological time, the time where we can be in time to save the rainforests, rescue the seas, and seal the ozone hole. But will we get back in time? Only time can tell.

NOTES

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[1] There is a sense in which an interest in the past and history has increased in recent decades. This sense is uncovered and criticised by Füredi (1992). Füredi argues that politicians and political theorists aided by sympathetic historians are engaged in 'plundering the past' (Füredi's phrase, see pp.3-5) for heroic examples to cite in support of the particular values they wish to promote. This interest is acknowledged here, but its existence does not contradict the general thesis put forward that the past is largely irrelevant today.

Firstly, this interest is not a general interest. Füredi himself warns of the common error of 'confusi[ng] the historian's desire to provide a past with a popular demand for it' (p.257). Secondly, one can question both the nature of the past and the nature of the relationship with the past: is this the real past and is this a real relationship? Füredi addresses these questions and answers them negatively. To pursue these questions explicitly here is beyond the scope of this paper. However, the answers derived from the perspective of this paper would also be negative. They would, though, be distinctive given, for example, Füredi's acceptance of chronological time as unproblematical (see p.265).

[2] Naess has also remarked the lack of concern for the future and stresses the importance of cultivating a 'long term perspective'. His explanation is that concern for the nth generation after us is inversely proportional to n^2, and so concern is very small for generations beyond our grandchildren (1990, pp.127 & 136-7). While agreeing with Naess' observation about the lack of concern for the future the explanation developed here is very different.

There are exceptional examples of apparent concern for the distant future. A notable one involves the visions of the very distant future offered by some cosmologists (e.g., eventual colonisation of the remotest galaxies). However, these are neither forecasts nor plans (rather they are fantasies, according to Midgley, 1992: see p.18 in particular). Their existence does not contradict the point being made here. Another is the contentious one of the projects to store nuclear waste. But such projects can be, and are, criticised as betraying a lack of true concern for the future since they introduce hazard into the future, a point developed later in this paper.

[3] See Nowotry (1975, pp. 328 & 337).

[4] The flight from the 'here and now' is a central criticism Midgley (1992) makes of the cosmologists who fantasise about the future (recall note 2). Such flight, she points out, at best distracts attention from the real issues of today; at worst these fantasies disastrously

distort our ideas of ourselves and our environment (and so our capacity to tackle these issues). See especially pp.11, 189-90, & 221-3.

[5] This 'psychopathology' of what he terms 'the empty present' is described by Levin (1989, p.261). His remarks further illuminate Midgley's point referred to in note 4.

[6] Other civilisations had between them a variety of instruments which measured time, such as sundials, waterclocks and sandglasses (see, for example, Boorstin 1984, Ch.4 'Measuring the dark hours', pp.26-35). But as De Solla Price argues (1975, p.375 especially), these non-clockwork timekeepers were not chronometers. They are better understood as instruments of kairological time (a key concept introduced shortly and explained further in note 10). These primitive timepieces offered guidance to the right time to do something (e.g., say a prayer, plant the seed corn, end a speech, celebrate a festival). They specifically did not measure out standard temporal intervals, as a chronometer does.

[7] See Brody (1981), p.40, and see also p.106

[8] The standard hour is a relatively recent concept. Traditionally an hour is simply a (loosely) specified period or point of time – as in expressions (now often poetic) such as: 'the hours of sleep', 'at the hour of departure'. So though the word is etymologically Greek, Hahn (1976, p.845) remarks that '..."hour" (in the sense of a measurement of chronological time) does not play a part in early Greek thought'. According to Boorstin (1984, p.39): 'It was around 1330 that the hour became our modern hour, one of 24 equal parts of a day [which] included the night.' However, clock dials representing these equal divisions were uncommon in the centuries which followed. Clocks merely sounded the hours at equal intervals. It was not until the end of the 17th Century (with the new found accuracy of the pendulum) that clocks commonly featured dials and hands which represented the hour comprising 60 minutes.

[9] See Boorstin, (1984, pp.30-32).

[10] *Kairos* and *chronos* are two Greek words for time. In Greek mythology both are gods. *Chronos* is the superior, the god of absolute time; *Kairos* is the youngest son of Zeus, and is the god of the 'right time'. An important distinction between the two times these gods represent is summarised by Hahn (1976, p.834): 'The presence of the two etymological groups, associated respectively with *chronos* and *kairos* for the concept of time, suggests that the Greeks distinguished individual periods or points of time which can be effected by human decisions (*kairos*) from the stream of time, whose progress is independent of any possible human influence (*chronos*). The will to seize the moment, which can naturally also grasp the wrong thing (*kairos*- thinking), counteracts the danger of fatalism, which could grow out of *chronos*-thinking.' Relative to chronological time, then, man is passive – at best reactive; by contrast, kairological time requires response from man.

Consistent with the pre-philosophical thinking of the Greeks as revealed in their myths, is the more formalised view expressed by Guhrt (1976, p.826): '*Chronos* chiefly denotes the quantitative, linear expanse of time, a space or period of time, and is thus a formal or scientific conception of time.... By contrast the characteristic stress of *kairos* draws attention to the content of time, negatively as crisis, and positively as opportunity.'

In the secularisation of society – from the Renaissance, through the Enlightenment, and on up to the present era of science and technology – man has usurped what was once seen as the prerogative of the gods, God or Nature. Here we see that *chronos*, originally the macrocosmic time of the gods, has been appropriated by man. In the process, the time offered by the gods to man, *kairos*, has been largely forgotten. So though rejecting the gods, man has rejected, not the time of the gods, but the time which was man's. This essay

draws attention to the poorly considered consequences of the rejection. The fate of a culture which has substituted *chronos* for *kairos* as its own could be interpreted as hubris.

The *chronos* of the Greek gods and the Bible, has been transformed in being appropriated by man. For example, traditionally a man's lifetime would have been described in terms of *chronos*. A lifetime was always regarded as a 'chronological' interval or duration. But as a traditional chronological unit it differs clearly from contemporary, chronological units. Unlike the modern hour, a lifetime is not a standardised unit interval. (There are clear parallels here with the standardisation of spatial metrics, such as the foot.) Yet, though not standardised, there was nothing arbitrary about the duration of a lifetime. The duration was determined: determined not by man, but by the gods.

The ancient chronological landscape, no less than the geographical one, was given; man was required to adapt and respond to what the gods had sculpted. As this essay later elaborates, the modern chronological landscape is by contrast fluid or plastic. The modern landscape is one that man himself can form or modify. A lifetime here is not given, but a duration to be extended (a point discussed further in note 15).

Finally, it should be noted that philosophical accounts of time attend to time as *chronos*. Both Plato, in his description of time as a 'moving image of eternity' (*Timaeus*, cited by Heidegger, 1962, p.475), and Aristotle, who defined time as 'that which is counted' (*Physica*, cited by Heidegger, 1962, p.473) discussed time as *chronos*. Heidegger himself does not allude to *kairos*. However, he seems to point toward it in his account of authentically understood time as having '... by its very nature the 'time for something' or 'the wrong time for something'.' (op.cit., p.467).

In the discussion which follows 'chronological time' refers to the time appropriated by man, not to the chronological time of the ancients or of theologians. Thus, where I later write of the loss of 'the chronological future' I refer to the secular, humanistic future as known and experienced by modern man. Whether there is, or ever was, a reality to the *chronos* of the Greek gods and to its future, and if so, what the nature of this reality is, remain open questions here. What I am suggesting in this essay is that if as (post-) moderns we reject traditional beliefs about time, it becomes unclear (to put the matter mildly) how we can retain a faith in the future. In fact, we don't, I argue. We do not have faith in the future because we cannot, but we have yet to accept the absence of the future. The difficulty of even recognising the absence is intimately related to our core belief in progress.

[11] There are signs that the modern, humanistic conception of time began to appear in Roman times. Both Boorstin (1984, p.26) and Wright (1992, p.29) cite a poem by Plautus (died 184 BC) in which the poet contrasts the time which he obeyed as a youth and the time which commands him as a man:

> The gods confound the man who first found out
> How to distinguish hours! Confound him, too
> Who in this place set up a sun-dial,
> To cut and hack my days so wretchedly
> Into small portions. When I was a boy,
> My belly was my sun-dial; one more sure,
> Truer and more exact than any of them.
> This dial told me when it was proper time
> To go to dinner, when I had ought to eat.

But now-a-days, even when I have,
I can't fall to, unless the sun give leave.
The greater part of its inhabitants,
Shrunk up with hunger, creep along the streets!

Though the words have a contemporary ring (and appear to contradict the thesis of De Solla Price – see note 6) the situation Plautus bemoaned is an intermediate one: the heavens still rule, and the 'hours' are variable, as noted earlier. Plautus could, rather, be cited as support for Heidegger's general assertion that the roots of our modern civilisation and technology lie in the ancient, classical world of Greece (and thence reach us through Rome). While the Greeks may have experienced time (and the world generally) in a traditional fashion, their philosophers were intellectualising about such matters in a way which has only become manifest or actualised in recent centuries. Stambaugh (1972, p.x) notes that Aristotle's theory of time '... can be roughly described as a series of now-points.' (For a development of this remark see Heidegger, 1962, pp.473-80.) Two thousand years elapsed before this theory became concretised practice with the tick-tock of the pendulum clock.

[12] 'In Europe the first mechanical clocks were designed not to show the time but to sound it. The first true clocks were alarms.... Probably the [earliest] were small monastic alarms, or chamber clocks called *horologia exictatoria* [striking-out clocks], or awakening clocks.... These rang a small bell to alert a monk to summon the others to prayer. He would then go up to strike the large bell, usually set high in a tower, so that all could hear.' In keeping with tradition, and as in Rome for example, '... monastic clocks were adjusted to vary the time between bells according to the season.' (Boorstin, 1984, pp.36-7). Hence, as Boorstin remarks, our word clock derives from the Germanic word for bell. This is still clear from the modern German word for bell: *Glocke* (though the Germans themselves refer to a clock as *eine Uhr*, 'an hour'). 'Three o'clock', then, is literally 'three of the bell'. Boorstin's understanding is supported by Whitrow (1972, p.2).

It seems to me that it was not these monks, but the visionary Francis Bacon who anticipated a new time. In a seminal essay (Bacon, 'The Masculine Birth of Time') he envisaged facing the future in the manner described in the following pages of this essay. A particularly important influence of the new chronology advocated by Bacon is remarked in note 15.

[13] An important illustration of how other civilisations looked to the past is offered by the Chinese. Joseph Needham (1981, pp.101 & 104) claims that '... the Chinese were the most historically minded of all ancient peoples.... It would be true to say that in Chinese culture history was the 'Queen of the Sciences', not theology or metaphysics of any kind, never physics or mathematics.' As Needham explains, history served as the principal science of government in China over two millennia.

[14] A deeper ontological probing, as undertaken by Heidegger, suggests that being open to the past and future is essential if the present is to be kept open to the presencing of whatever is given to presence. This is a principal point of his lecture 'Time and Being'. 'Time', for Heidegger, is not 'the succession of a sequence of nows' (p.14, and recall Aristotle's conception described in note 11). Rather, it is an 'openness' which '... provides the space in which space as we usually know it can unfold.... the opening up, of future, past and present is itself pre-spatial; only thus can it make room, that is, provide space.' (p.14) How is this opening of space accomplished? 'What has been which, by refusing the present, lets that become present which is no longer present; and the coming toward us of what is to come which, by withholding the present, lets that be present which is not yet present – both

made manifest the manner of an extending opening up which gives all presencing into the open.' (p.17)

[15] The medical task of lengthening lifespan appears a self-evident and self-justifying one. It was not, however, a task of pre-modern medicine, as Arendt (1958, p.315) remarks, citing Plato's Republic 405C. It was first proposed as a medical goal by Francis Bacon. See Achterhuis (1992), pp.175-6.

[16] My local paper recently advertised a 'Timeshrinker Exhibition of Office Technology': thus is the equipment exhibited ('photocopiers, facsimile, computer systems, printers, electronic filing, word processors') presented.

[17] For the etymology of *Zukunft* see Heidegger, *Being and Time*, p.372, especially the translators' footnote 3.

[18] The sense of past and future described here is even more clearly revealed in the Celtic language of Gaelic. For a speaker of English, or any of the more 'modern' European languages, it may appear astonishing that Gaelic lacks simple words for either past or future. Instead there are phrases: *anns an am atha ri tighinn* – 'in the time that is to come' for the idea of approaching, futural time; *anns an am a chaid seachad* – 'in the time that has gone past' for the idea of a receding past.

Gaelic does have more synonyms for time than English, however: in addition to *am* there are *aimsir*, *side*, *trath*, *tim*, *uair*, and *uine*. Amongst these the distinction between chronological and kairological time is recognised. *Uine* is chronological, denoting time in the sense of a period or interval. *Side* and *aimsir* are explicitly kairological being also synonyms for 'weather'; so the phrase *tha side math airson iasgach* can be translated either as 'it is a good time for fishing', or as 'it is good weather for fishing'.

[19] For a radical account of the meaning of hearkening to time see Levin (1989, pp. 258-69). Levin's conclusions are consonant with the argument here. He writes: '... the future can be wholly 'collected up' ... only when we relinquish all expectations, all representations .... so we must let the future be a future, be absent as a future' (p.268).

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