

FUTURES TOLD

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Abstract

This paper investigates how futures have been told since time immemorial. It explores who have been and are still thought of as experts on the future, examines the sources of their specialist knowledge and surveys the methods employed. It shows that it matters whether the future is considered an aspect of nature or the cosmos, a sphere that is owned by god(s), a property of the sovereign or a realm that belongs to people. It argues that these different sources of ownership have knock-on effects for the way the future is perceived, the nature of the knowing and the anchoring of responsibility. Thus, when people's relationship to the future changes from fated recipient to protagonist and agent of change the locus of responsibility is altered as well and the onus is on the new owners to know their projections and production together with their potential ramifications and effects. *Futures Told* provides comparative analyses that establish both continuity and distinctions between telling the future by means of divination, prophesy, prediction, forecasting and futurology in order to open up for consideration ways of knowing futures that are appropriate to the very long-term effects produced by contemporary future-creating practices.

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FUTURES TOLD

Introduction

'Knowledge of the future is a contradiction in terms' (Jouvenel 1967: 5). Yet, despite this contradiction, futures have been told since time immemorial and forecasting the future is something we still do on a daily basis. All of us are prophets, predictors, prospectors and planners of the future when we negotiate traffic, keep appointments, honor obligations and commitments. The future is envisaged and assumed when we explain what we will be doing today, tomorrow and in the more distant future, when we declare that we are going on holiday in three months time, that we are learning to drive a car and taking out insurance for it, that we are moving house, changing career and signing an employment contract. All these projections and plans imply knowledge before the event and depend on a substantial stock of experience and tacit know-how. In our daily lives we move in and out of such different futures without giving much thought to the matter, treating many aspects of the 'not yet' as known, rarely attending to what it is we do in such situations and how we go about doing it. When the personal reservoir of knowledge appears insufficient, there has been and still is a tendency to turn to experts who have specialised in particular aspects of telling and foreseeing the future.

In this paper I consider who have been and who are still thought of as experts on the future, examine the sources of their specialist knowledge and survey the methods employed. I show that it matters to practice whether the future is conceived as pre-given and actual, as empty possibility or as virtual realm of latent futures in the making. I indicate that different sources of ownership have knock-on effects for the way the future is perceived and responsibility anchored. If the future is in the hands of god(s), for example, efforts to know the future are more likely to involve discovery, disclosure and interpretation of destiny, fate and fortune. If it is tied to the cosmos then calculation, prediction and extrapolation of constellations and auspicious moments for change may be involved. If, in contrast, the future is seen as ours for the taking and making then imagination may be employed for conjecture, creation, colonization and control. Utopias may be constructed and pursued. Once people's relationship to the future changes from fated recipient to that of protagonist and agent of change (Peccei 1982: 11) the locus of responsibility changes too. It is moved from its external position to the new owners and protagonists. The onus is on them to know their projections and production, including associated potential ramifications, in order that they may accompany these creations to their eventual outcomes.

The paper takes the reader on a journey that extends from earliest cultural activity to the contemporary world of planning and producing futures by scientific, technological, economic and political means. Along the way it considers the many varied means that have been employed to know the unknowable, to achieve glimpses of the not yet, gain knowledge before the event, provide advance warning, conjecture about possibilities and prepare for uncertainties. It familiarises the reader with practices of divination, prophesy, prediction, forecasting, foresight and scenario planning to provide comparative analyses that establish both continuity and distinctions between futures told across the ages.

Glimpses of Fate and Fortune: Divination

To divine the future is to engage with a *future present*. To practice divination is to expect a future that can be known, ‘seen’ and anticipated. Unlike, for example, the future of contemporary scenario planning which is open and marked by potential, the divined future tends to be pre-given, ready set out with little room for manoeuvre or influence. Divination therefore is an effort to know what gods and fate have in store for individuals and collectives. Furthermore, it is not the future in general that is being sought but answers to specific questions about what will happen in a certain situation, to a particular person, at a planned battle or journey.

In ancient civilisations diviners were experts that tended to be held in high social regard. They advised sovereigns on all aspects of their rule, providing guidance for both mundane and life-changing decisions. From archaeological finds we know that their craft was taught and handed down through the generations. Thus for example, *hepatomancy*, the inspection and interpretation of the surface and cavities of the liver, was practiced in the service of kings and nobles. It was used to foretell impending disasters and as guide to potential actions. We further know that this form of divination was taught on models in clay and bronze, which archaeologists have found in substantial numbers and traced back some 4000 years to the First Babylonian Dynasty and the civilisations of Assyria, Mesopotamia and Egypt as well as the Roman Empire (Lewinson 1961: 55). Ceasar’s demise, for example, was foretold by *hepatomancy* and prompted his appointed Psychic, Spurinna Vestricius, to council Ceasar, ‘Beware of the Ides of March’ (Shaw 1997: 99).

In her encyclopaedia of divination Eva Shaw lists some 1000 entries of both ancient and modern practices and practitioners of divination. Many of these specialist activities end in the suffix *-mancy*, which is derived from the Greek *manteia*, meaning divination and has its root in turn in *manteuesthia*, to predict and *mantis*, the prophet (Shaw 1997: viii). Thus, for example, *aeromancy* is the interpretation of cloud and wind patterns, *cleromancy* the reading of bones and other shaped objects that are thrown, while *geomancy* draws inferences about future happenings from the patterns and shapes of natural objects. The suffix identifies the origin of the practices in Mediterranean cultures. Other divinatory traditions extending back as far and further into pre-history are associated with the use of symbols. In China, for instance, the use of the *I Ching* is thought to date back thousands of years, whilst cultures extending from Northern Italy and Germany to Iceland and Ireland are known to have consulted runes since the Neolithic period. The runes are marked with symbols and are cast much like the modern dice (King 2000; Shaw 1997). Divinatory activities of Celtic cultures, in contrast, are more difficult to identify since these oral cultures have left neither written records nor artefacts that assisted their sages’ extension into the future present. Their divinatory practices are preserved almost exclusively in mythical stories and song where they are associated with great powers of vision and foresight (Wood 2000, Zohar 1983).

Archaeological and historical evidence suggests that divination involved an immense diversity of practices, and yet, we can also discern some unifying features. What these traditions share in common is an assumption, first, that there is a future to be known, that the future is pre-given and, secondly, that it is our vision, our capacity to see this future which is imperfect, that is, clouded and shrouded in some way. With sufficient practice

and perseverance, it was therefore thought, we may be able to read the signs, interpret the patterns and gain a clearer vision of what nature, the cosmos and god(s) have in store. Thus, divinatory practices afford chosen specialists access to this opaque realm beyond everyday reach. These specialists, in turn, aid people's efforts to be prepared and help them to be ready for what is to come. Their assumptions are both similar to and different from approaches to the future that are based on reading planetary patterns and establishing connections to the future encoded in nature's processes. It is this distinction I want to explore in the next section of this paper by differentiating between shamanic and astrological ways of telling the future.

Cosmic Connections: Shamanism and Astrology

Shamans and astrologers share a common goal. Both seek to connect the human social sphere with cosmic forces, that is, to link the personal and social world with the patterns and energies of the universe. The way they seek to achieve these ends, however, differ significantly and so do their respective underlying belief systems.

The shaman is an ancient figure whose magic was (and to a lesser extent still is) valued in cultures across the globe: East and West, North and South (Drury 2000, Lippincott et al 1999, Shaw 1997: 236-7). Shamans act as bridges between the terrestrial and celestial worlds, between earth, gods and spirits. For Australian Aboriginal shamans, for example, the extraterrestrial world is the dreaming time, the realm of creation and destiny where everything is prefigured and to which all souls return at the point of death. In the most general sense and, irrespective of their specific cultural tradition, shamanic practice is concerned with the wellbeing of souls in a universe where every being and everything is imbued with a soul: animals, plants, rocks and mountains. Thus, for example, much reparation work has to be done with respect to the souls of beings that are consumed to ensure that the spirit world is kept in balance. Writing about shamanism in the arctic region, Nevill Drury quotes an Iglulik shaman who acknowledges this very problem.

‘The greatest peril of life lies in the fact that human food consists entirely of souls. All creatures that we have to kill and eat, all those that we have to strike down to make clothes for ourselves, have souls, souls that do not perish with the body and which must therefore be pacified lest they should revenge themselves on us for taking away their bodies.’ (Joan Halifax, 1982 in Drury 2000: 16)

In the course of their important work shamans are able to leave their bodies and journey to the sky, the depth of the seas and beneath the surface of the earth where they make contact with the spirit world, seeking atonement or asking for guidance, advice and help. They are able not only to transcend the spatial limits of earthly existence but also the temporal boundaries imposed on terrestrial life: they move with ease between past, present and future, from whence they report back to the present. The shaman, we need to appreciate, is not a medium but an intermediary and a mediator. Moreover, shamanism is active, seeking out the spirits and souls to be consulted and concerned to keep cosmic energies in balance. Shamans are chosen ones whose power is both earned and bestowed, involving not just extensive personal development but initiation rites that take them to realm of death where significant parts of their being are exchanged for ones that aid their visionary activities. Despite the altered state of consciousness, which is an integral part of

their specialist practice, however, shamans take full responsibility for each of their journeys and the respective outcomes.

To appreciate the difference between shamanism and other divinatory practices, it is helpful to briefly consider *necromancy*, the communication with spirits and souls of the dead, associated with the ancient world of the Middle East, Greek antiquity and the Old Testament. In this divinatory tradition the dead were thought to have privileged access to the future but since to wake and unsettle them was considered a dangerous enterprise, specialists were needed to conduct the ritual investigations. Babylonians, for example, had special priests who were experts in *necromancy* (Lewinson 1961: 65). However, while their subject matter and their role as mediator often coincided with that of the shaman, *necromancers* were neither expected to enter those realms themselves nor did they tend to be held responsible for the pronouncements resulting from their mediations.

The ancient civilisations of Assyria, Babylonia, Egypt, Persia, Greece, India and China as well as those associated with the empires of the Mayans, Incas and Romans all shared in the belief that human fate is connected to the stars and the gods associated with these heavenly bodies. All are known to have relied on astrology to guide their decisions, appease their gods and ensure their collective prosperity. Like shamans, astrologers are mediators but unlike their counterparts in divination they can practice their craft without the need to journey to the worlds they seek to connect. Their knowledge draws on accumulated recorded wisdom that links the movements and constellations of planets with personal character traits and destinies. Like many other divinatory practices, astrology requires knowledge of patterns and understanding of interdependencies and it relies on highly complex calculations. The resulting birth charts identify pre-dispositions as well as potential and auspicious moments for action, which means they are both determined and contingent.

A first change in the fortunes of this ancient knowledge system occurred when Aristotle began to shift his allegiance from astrology to the science of astronomy. From this period onwards, there has been a noticeable decline in the public status of astrology. Christianity and later the rise of science have further dented the collective appreciation and acceptance of astrology as a means to tell the future but they have by no means eradicated its popularity. Thus for example, as late as the 17th century in France, the chair of royal professor in mathematics was occupied by the astrologer Jean-Baptiste Morin, who was highly valued for the power of his predictions (Jouvenel 1967: 49). Furthermore, astrology continued to play an important role in medicine. Since every part of the body was thought to be related to a sign of the Zodiac, the timing of operations and other medical interventions was considered crucial. As Richard Lewinson (1961: 81) notes, in the Middle Ages, 'any doctor who failed to consult the stars before an operation was open to charges of wilful neglect'. Today, most Americans and Europeans still know their birth signs and many of them read their horoscope, even if they don't take it (very) seriously. During the early 1990s, more than 10,000 astrologers were practicing in the USA (Shaw 1997: 18); many held advisory positions in business (Alexander 1992). And, if the popular press are to be believed, numerous high-ranking politicians as well as their leaders have availed themselves of their services.

For astrology, both timing and regular, predictable motion are of the essence: the accurate time and place of a person's birth and the precise constellation of the stars at a particular moment in time are related to the right and wrong time for decisions and actions. Exact timing and regular predictable motion are thus the sources of knowledge for this particular mode of telling the future. Moreover, unlike shamanistic insights, the knowledge produced by astrologers is external to the person conducting the enquiry. It is verifiable by others who possess the same knowledge and skills. It shares this feature with scientific prediction. Where astrology differs from contemporary scientific predictions, as we shall see below, is in its unverifiable postulation of connections between the planetary constellations, the human psyche and social action. In a socio-cultural world that thrives on knowledge rooted in scientific causality, it is the difficulty of establishing causal connections for the proposed interdependencies that proved instrumental in the demise of astrology as a respected science. It is this insistence on causal connections that today also poses major problems for all forms of prophecy to be considered valid knowledge of the future. A recent prophetic movement can serve to illustrate the point.

Of Voices and Visions: From Prophecy to Precognition

Oracles, prophets and mediums are conduits for the messages of god(s), spirits and souls from the netherworld. They are the message-bearing bodies through which extraterrestrial beings convey their wills and intentions. Prophets are the channel through which divine purpose is revealed. The source of their visions and knowledge is thus external to them. Moreover, whether sacred or secular in nature, prophecies disclose something that is pre-existing and/or pre-designed, yet opaque for the fated recipients. Thus, for example, both Greek and Nordic mythologies are replete with stories about attempts to avert the prophesied fate that have been thwarted, and foretold futures that invariably have come true. Finally, where the work of the shaman is active, that of the prophetic medium is marked by a more passive receptivity. This has implications for the extent to which responsibility can be apportioned to the mediator and the medium respectively.

These relations emerge with particular clarity from a recent historical study, which reports on a Welsh religious revival movement of the early twentieth century. Rhodri Hayward (1997) draws some extremely interesting conclusions from the distinct nature of the prophetic practices of this revivalist movement's key protagonist and figurehead Evan Roberts (1878-1954). Roberts, a trainee minister and occasional collier, had numerous visions and visitations of the Holy Spirit. Roberts' approach to his visions and his self-perception as acted upon rather than acting linked him with earlier prophetic traditions, such as the incident recounted in Jeremiah (1:9) when Jehovah told Jeremiah '*Behold, I have put my words in thy mouth*' (Hayward 1997: 162). Roberts relinquished his own autonomy and declared himself ready to do 'anything and everything; anywhere and everywhere', in service of the divine (Hayward 1997: 166). Drawing on the work of Michel Foucault, Hayward suggests that the position of the prophet who submits to an external authority is a potentially deeply subversive one that cuts across traditional (i.e. modern scientific) understanding of identity, authorship, agency and responsibility. Moreover, it puts the prophet in a liminal space beyond blame, criticism and accountability for his or her inspired pronouncements and actions (Thaite and Thornton

1997). Women and children, conventionally the most disenfranchised members of communities, were particularly empowered by this deep-seated subversiveness of the prophetic role. As Hayward notes, their

‘connection to the Holy Spirit allowed them to subvert the traditional framework of parental and community control...

In its disruption of the familiar identities and hierarchies it revealed the contingency of the world and the emptiness of earthly authority.’ (Hayward 1997: 170-1)

Hayward (1997) shows how, in response to the spread of subversive activity beyond the control of conventional authority, scientific psychological studies were initiated to investigate the voices and visions which were by then experienced by large numbers of ordinary members of communities across Wales. These investigations found that believers’ visions of the future were mostly fragments of a forgotten past: of Sunday school education and of a repressed collective Celtic consciousness. They further pointed to a deeply anchored Self, an enduring identity, which Evan Roberts had been at pains to eradicate. With this turn to psychology, prophesies and visions were re-encoded within individual and collective memory.

‘Through the rhetoric and perspectives of the new psychology, the meaning of prophesy was reversed. It was seen no longer as a revelation of the future but was instead interpreted as the eruption of a forgotten past... Prophesy was no longer seen as a divine sign of the intervention of God, rather it was interpreted as a psychological symptom demanding the intervention of pastors and psychiatrists.’ (Hayward 1997: 175)

Although Hayward does not make this connection, in a contemporary world organised to the principles of rational science and built on an understanding of the autonomous individual, hearing voices and the abdication of ones agency is primarily associated with mental illness and schizophrenic episodes. Similarly, the gifts of ‘seeing into the future’ – clairvoyance, extra-sensory perception and precognition, for example – are incomprehensible and highly problematic from a contemporary mode of understanding that is rooted in linear causality and positivism, that is, a commitment to past-based empirically verifiable explanations. The scientific perspective is no longer receptive to a way of extending to the future that was everyday and mundane during earlier historical periods. No small wonder then that contemporary (western) societies consider cultures that still value prophetic extension into the future as unintelligible and inscrutable. From a scientific rationalist perspective, I want to argue, the distance to such traditions is difficult to bridge. From some Eastern perspectives, attuned to synchronicity and synergy rather than linear causality and rationality, in contrast, the bridge to such knowledge is more easily built and the access route to some of its ancient wisdom kept open.

And yet, it is possible to discern that the numerous investigations not just of prophetic visions but also of clairvoyance and precognition have left their residue of disquiet with the scientific psychological fraternity. Seeds of doubt have been sown in the domain of rational certainties. The extension into the future continues to demand attention, despite the fact that its various forms remain persistently and obstinately elusive to the conceptual and methodological tools of the conventional past-based scientific canon.

Only when connectivity, interdependency, complexity, synergy, synchronicity, a-causality and time-space distantiation¹, for example, are being embraced can we begin to make sense of phenomena that reveal connections to other times and other spaces, both past and future.

To appreciate the gulf that separates contemporary western and traditional modes of extending into and telling the future we need to turn to scientific predictions, economic forecasting and political planning, before completing this paper with some considerations about futurology and the lack of tools for knowing the long-term futures produced by contemporary applied science and technology.

Predictions, Projections and Promises in Science, Economics and Politics

If we understand prediction, forecasting and projection as contemporary industrial societies' ways of telling the future then we need to grasp them in both their continuity and discontinuity with predecessor modes of accessing the 'not yet'. Of traditional methods we can say that they were efforts to find answers to particular questions and gain foreknowledge of specific fates. The associated specialists were thus concerned to reveal *future presents* and sought to access these by connecting disparate realms of existence: cosmos, nature and personal worlds or the domains of spirits, souls and gods with earthly paths and individual lives. Diviners, shamans, prophets and astrologers were and are concerned with future presents, both near and distant, their skilled inquiries yielding secrets closed to ordinary mortals. Over and above the individual differences between various diviner's methods and sources of knowledge we can say that they share(d) an assumption that the future present is pre-given and that it requires specialist skills to unlock its mysteries. Appropriate to the opaqueness of the domain of inquiry, traditional pronouncements on the future may be in symbolic form, in riddles and rhymes that leave ample room for context-specific interpretations. When we enter the world of scientific predictions we find that most of these principal assumptions and methods of divination have been abandoned.

A first noteworthy distinguishing feature of scientific prediction relates to the level of certainty that can be obtained by scientific methods of telling the future. For example, where scientists refer to cyclical and regularly occurring natural events, such as planetary motion, the likelihood that these will continue in the future is very high. If one has full and extensive past knowledge of such processes one can predict that in the same circumstances the same conjunctures will occur in the same way in the future. The source of knowledge for such predictions is a collection of past observations projected into the future. The past is the basis on which scientific laws are established and the ground on which it is possible to know the next eclipse of the moon or that water will always freeze at zero degrees centigrade. The socio-historical and economic world clearly does not provide us with equivalent laws: the social past does not determine the social future. History is not an infallible guide to what is to come. Socially produced change, innovation and progress mean that prediction of *social* futures by scientific means is a far more precarious affair. Despite this general difficulty, however, for certain circumstances the shift to scientific methods has improved the degree of certainty with which social

¹ Anthony Giddens' widely used term for the stretching of phenomena across time and space

futures can be foretold. The way this has been achieved is of relevance to our investigation.

With the exception of religious prophesy, a common feature of the modes and methods discussed in previous sections has been the attempt to access individual futures and find answers to particular questions. During the late sixteenth and early seventeenth century first attempts were made to tell the future not just for individuals but for aggregates of individuals and facts. Rates of change rather than individual or unique change became the focus of predictive attention. This was the beginning of probability calculations. From church records, for example, it became apparent that death rates were reasonably constant over time, as were the average life expectancy, the annual baptisms and the marriages. Even the causes of death seemed to follow identifiable patterns. With the application of statistical calculations it was possible to project those known figures into the future and predict social patterns of this kind with surprising accuracy. As Richard Lewinson notes,

‘Probability statements are merely projections of the past into the future, on the assumption that the causes – no matter whether they are known precisely or not – will remain the same and will continue to have the same effects.’ (Lewinson 1961: 248)

It was also found that the larger the database was on which the predictions were based, the closer to the eventual outcome were the probabilistic projections. While this method of forecasting did little to tell individuals about their personal fates and fortunes, it vastly enhanced socio-political planning and policy. In a working paper on ‘taming futures’ I show how this method of telling futures on the basis of known aggregates has led to the development of insurance and numerous other social institutions through which uncertainty has been rendered less threatening and the unknown tempered.

We can say, therefore, that in distinction from other forms of telling the human future scientific prediction is largely concerned to forecast outcomes not of individual but collective actions and events. We can further say that scientific prediction is founded entirely on knowledge of past facts. If there are no past and existing aggregates of facts the future cannot be predicted. Thus the more novel the situation to be projected the less prediction will be appropriate as a tool for telling the probabilistic future. The UK’s BSE (Bovine Spongiform Encephalopathy) crisis during the late 1980s, where cattle were afflicted by an unknown *prion* disease that seemed capable of being transferred to humans, was a prime case in point. Scientists were confronted with a new disease for which they had no prior knowledge upon which to predict future deaths of animals and humans. This drama of uncertainty, lack of past knowledge and inadequacy of established tools was played out daily on television and in the newspapers, with journalists and politicians demanding projections and prognoses about the progression of this disease in order to be able to act appropriately and scientists desperately trying to explain that this was a situation where science was unable to make predictions. Without certainty of past facts scientists had no basis upon which to calculate the future. Many years of research would have been needed to accumulate and collate data that could provide a secure base from which to make predictions about the progression of this disease (Adam 2000). Medical physicians, who are regularly expected to make prognoses about the progression of their patients’ recoveries from illness, would be in a similar predicament when confronted with an unknown disease. Thus we can summarise that scientific prediction

relates to aggregates, is based on probability, and relies on causal chains from which futures are projected on the basis of a known past. This applies to knowledge about the cosmos, nature and the social realm. In cases where there are no past records, no relevant causal chains or no data, the future cannot be calculated. As far as science is concerned, therefore, without such knowledge, there is simply no future to foretell.

When probability theory is applied in economic contexts it is again aggregate phenomena that are being calculated and projected, such as the distribution of income and expenditure. In addition to these and other key features that allow for past-based prediction, economists have noted regularly recurring cycles in the economy of crisis, recovery and growth. Since the middle of the nineteenth century, three cycles in particular have come to prominence (Lewinson 1961: 251-79; May 1996: 135-9). In 1860 Clément Juglar identified economic cycles of seven to nine years and suggested that these patterns of recurring crisis played an essential and rejuvenating role in the economy. In the nineteen-twenties a subsequent generation of economists distinguished also shorter and longer cycles which they found to be both independent from and intersecting with the Juglar cycles. Thus, Joseph Kitchin, who studied the UK and US economies over a period of some thirty years, discovered shorter cycles of some 40 months, while N. D. Kondratieff recognized longer ones of 40 to 50 years. Moreover, patterns were observed within the retail price index, mortgage rates, bank base rates and many more economic variables. These observed patterns proved strong predictors as long as no extra-ordinary circumstances arose. Thus, for example, the great depression of the late nineteen-twenties did not fit any of the mapped and projected cycles and consequently caught most economic forecasters by surprise. Since the economy is sensitive to socio-political events there is much that can and will interfere with even the most stable and established patterns of economic activity and thus thwart the economists' best calculations of future effects (Evans 1997). What is important to note here is that analogous to scientific causal analyses and predictions, the bases of economic predictions are past and *present futures* rather than the *future present*, present futures being ones that are imagined, planned, projected, and produced *in* and *for* the present.

This present orientation is particularly prominent when economic futures are not just foretold but created through the *trade in futures*, a practice first recorded for rice markets in seventeenth century Japan (Boden 2000). 'Futures trading' is the trade in projected prices of products for which there is or may not yet be a market. It is a commitment to buy and sell something of a pre-specified standard, at a pre-appointed time and at a future price agreed in the present. The predictions produced in futures markets, therefore, are extremely present-based whilst the activity itself operates in the realm of medium and long term futures with significant effects on social wellbeing. The detail of this particular way of engaging with the future is not important at this point as we shall have opportunity to revisit this practice in later research and working papers. Here I am interested merely to establish the principles upon which futures are told, the methods employed and the assumptions that are brought to bear on predicting and forecasting practices.

Both the past and the present seem to be abandoned in favour of the future when it comes to the contemporary practice of projection. Projection refers to an intention made public

before the fact or event. It is practiced not just in industry, commerce and politics but also in science. In politics, for example, governments project, thus ‘tell the future’ with the aid of manifestos, promises and blueprints for action. In distinction to forecasts, predictions and futures trading outlined above where predictions are dependent on accurate knowledge of the past extended into the future, projections are pronouncements of promised futures which are planned to be produced and actualized. The source of knowledge for such projections is the actively chosen future for which nevertheless the outcome is by no means assured. To foretell the future of your own design is clearly such a dramatically different approach to foresight and prediction that one might argue it does not belong in this paper at all. Yet, I would like to suggest that to understand the difference to other forms of divination and prediction is a precondition to appreciating some of the proposals put forward by contemporary futurologists for responsible engagement with future-creating activities. A first thing to note is that projection as a prediction of the future to your own design appears to make forecasting a substantially less hazardous activity than the other methods I have outlined in this paper. On closer inspection, however, it becomes apparent that it is by no means easy to fulfil the pronounced promises and to bring such projected intended futures to actual fruition. How the promised future is approached, it seems, makes a crucial difference to the successful actualization of projections.

In other working papers on this futures project Chris Groves and I outline some of these approaches in terms of the difference between understanding the future as an architect who works to a blueprint and an artist such as a sculptor, for example, who allows the material to play a key role in the shaping of the object. The former follows a pre-defined critical path from inception to conclusion while the latter allows for surprises and diversions, takes account of interdependencies and is sensitive to the unique circumstances that impact on and thus play a role in shaping the end result. Successful governments, that is, ones that fulfil their pledges and achieve their projected futures, seem to relate to their manifestos and election promises more like sculptors than architects. Their aspirations and plans for their country may be thwarted at many a turn, not least because they are globally tied into networks of economic, political, legal, military, environmental and many other relations. This interdependency means that the known future of their promise is not theirs alone to give and fulfil, that literally millions of others partake in the shaping of that promised future, thus have a hand in its coming to fruition. The promised future may be ‘known’ but in the case of manifestoes, for example, it is the capacity to fulfil the promise that is full of pitfalls, wrought with danger and characterised by uncertainty. Thus, to know the projected pre-set future is not yet a guarantee to know the outcome. It is worth noting therefore that in this particular case efforts to tell the contemporary future are beset by difficulties that would have been familiar to diviners of all ages.

On first sight, promises and projections of future outcomes of present activities are not a scientific mode of engaging with the future which is based on predictions that are established on the basis of a known past. On closer inspection, however, we find that projections emanate regularly from the laboratories of science, medical research centres, pharmaceutical companies and many more institutions where science finds application. Thus, for example, with nuclear power the public was promised electricity too cheap to

meter, with geno-technology cheap, nutritious food to feed the starving, wholesale modernisation of agriculture and cures for numerous genetic diseases. The promises, projections and visions of potential issuing from the various branches of science, we need to appreciate further, are no more certain of their predicted outcome than those made by economists or politicians. They are subject to the same delimitations and thus just as vulnerable to disappointment. Here as everywhere else, certain conditions and interdependencies influence the projected outcome: The more innovative the practice, the less secure is the basis from which to make accurate projections. Equally, the more socially interconnected the activity, the more chance there is for interference and derailment of the plans. Both these conditions have inevitable knock-on effects for the fulfilment of promises, irrespective of whether the promisers are economists, politicians or scientists. In the case of projections, therefore, scientists have no privileged position with respect to the certainties of their promised results. Worse still, they have abandoned the territory upon which the logic of their investigation of the future is founded. Futurologists have set themselves the task to engage with these issues and confront the difficulties associated with knowing and telling the future which I have begun to outline in this paper. It is therefore futurology and some its central insights that I want to focus on next.

Futurology: Study of Possible, Probable and Preferred Futures

Engagement with the future, whatever methods are employed, means we have to abandon expectations of certainty and sure knowledge, leave behind a material world amenable to measurement and quantification and enter instead a realm of uncertainty and potential. Futurologists tackle the problem of uncertainty head-on and acknowledge that futures studies necessarily engage with a combination of possible, probable and preferred futures (Bell 2003/1999). This means that unlike their traditional counterparts, today's experts on the future have abandoned all expectations about a pre-existing future, and assume instead an open future that is yet to be imagined, designed and produced.

To set out the parameters of the task, most futurologists refer to a distinction which Bertrand de Jouvenel established on the first page of his path-breaking *The Art of Conjecture*. Jouvenel (1967: 3) directs us to the Latin terms *facta* and *future*. The former, he explains, refer to past events, done, achieved and completed, the latter to that which has not yet come about, something that will become a *factum* only after it has occurred. While the one has already taken (unalterable) form the other is still open to influence and thus 'capable of ending or being completed in various ways'. Brumbaugh (1966: 649 in Bell and Mau 1971: 9) refers to the distinction in a slightly different way when he asserts that, 'there are no past possibilities and there are no future facts'. In both cases the past is closed to influence, thus open to factual knowledge while the future is open to choice and efforts to colonize and control, and thus closed to factual inquiry. It is for this reason that Jouvenel prefers conjecture to any of the other concepts open to us when talking about and seeking to know the future. Acknowledgement of the conjectural nature of any extension into the future, he suggests, helps to avoid illusions about a knowable future and the confusion between *facta* and *future*. Jouvenel's dichotomy stands like a motto above most serious futurological writing. The distinction, and the particular quality of the future that arises from it, is taken for granted, has assumed the form of naturalised fact. To date, most methods and approaches of futurology flow from its foundations. When the

temporal realm is divided into *facta* and *futura*, we need to appreciate, then past efforts to tell and know ‘the’ future have to be considered futile since, on the basis of that distinction, ‘the’ future does not pre-exist but is instead open, yet to be formed, shaped and designed. Thus, from this perspective, not ‘the future’ but present possibilities for the future are real. Not *future presents* but only *present futures* are amenable to futurological inquiry.

In order to distinguish knowledge of socially constituted open futures from scientific predictions of natural processes, Waskow (1969) coined the term ‘possidiction’, by which he means the search for real possibilities, which is dependent on the social investigator’s skill of identifying desirable seeds of change that might flourish given the right socio-economic and political conditions and actions (Bell and Mau 1971: 36-7). ‘Possidiction’ therefore entails examination of the ‘actually possible’ rather than past-based repetitions, which are the subject matter of scientific predictions and projections of economic trends. This approach, Wendell Bell and James Mau (1971) argue, has methodological consequences. It means that the future is imported into the present where different possibilities are actualized (thus real) on the basis of images of the future. It means further that determinism is inappropriate for such inquiries since the future remains open until it has become present and past. And it means that the future is relative to the frame of reference employed. For futurologists, therefore, the future is a possible, *present future*, a future that is pictured, planned, projected, pursued, and performed in the present.

Since futurology is an engagement with *futura*, that is, with the realm that is still open to our influence, numerous tools and methods have been developed to study not just probable and possible but also preferred futures (Bell and Mau 1971, Bell 1997/2003, May 1996). This means the focus is not so much on what was and is, projected into the future, but more on what is likely to be and more importantly still, on what could be and what should be. In the latter two cases the knowledge base is the present from which possible and preferred futures are imagined, devised, constructed, planned and pursued. To Jouvenel (1967: 5) it is this openness which makes the future ‘the only field of power, for we can act only on the future’. While acting on the future is not just possible but essential, however, knowledge of potential outcomes of such future-creating actions is inescapably uncertain, hence, ‘a contradiction in terms’. To make best use of that power in contexts of inevitable uncertainty, therefore, Jouvenel suggests that we need to understand ‘emerging situations’ while they are still in forming flux and therefore subject to influence, that is, before they become facts. At the same time, however, we need to appreciate that the greater a society’s innovative change is, the less it can rely on the scientific source of that change to provide knowledge about the consequences of the processes thus set in motion. This led Bertrand de Jouvenel (1967: 275) to state that ‘our knowledge of the future is inversely proportional to the rate of progress’.

The implication of Jouvenel’s analysis is that in contexts of accelerating innovation, in which the structures and forms engendered by those innovations are increasingly dissolved, knowledge of the future is moved progressively closer to the present and knowledgeable extension into the long-term future moved ever further out of reach. While this is clearly and unquestionably the case, the retreat to past and present-based knowledge of the not yet, that is, to *present futures* only, cannot and must not be accepted

given that our actions reach into ever more distant futures and cast ever longer shadows. Secondly, we need to avoid the conclusion, which arises from the distinction between *facta* and *future*, as outlined above, that there is no pre-figured or pre-set future to be known, nothing to be foretold beyond the patterns, cycles and rates of change that continue from the past and are thus amenable to study with the past-based tools of scientific investigation and extrapolation. Instead I want to argue that knowledge of *future presents* is a precondition to engaging responsibly with futures of our making, that is, futures already set on the way whose effects extend into the very long term future from hundreds and thousands of years to millennia. Before I explore in the last part of this paper what might be involved in contemporary attempts to know distant future presents, let us summarise first some of the principles of knowing the future so that we may begin to recognise what aspects of past knowledge and methodologies may be helpful for the contemporary task.

A primary distinction I have sought to foreground in this paper has been between, first, attempts to extend into particular and unique future presents - individual, socio-cultural or natural - secondly, efforts to know futures that are continuities from the past based on the probability of aggregates and constellations of facts recurring and, thirdly, endeavours to map possible, probable and preferable futures as basis for future-creating choices, decisions and actions. Thus the wide variety of approaches discussed above can be differentiated according to where on the temporal spectrum their primary source of information is anchored, that is, in the future, past or present. Notions that we can foresee, presage, envisage, predict or prophesy the future, as Graham May (1996: 113) points out, suggest knowledge before the event but do not suggest influence over future. Thus, divination in all its various guises implies that it is possible to receive advance knowledge and warning about things we have no influence over, in other words, that one can prepare for the future but not change it. These ideas have faded out of use as increasingly the future has become the domain not of gods but of human action, influence and power. Furthermore, when people cease to be mere recipients of others' design and move instead into the position of protagonists, agents of change and producers of fate and fortune then not just the ownership of the future but also the locus of responsibility has altered. And with that change the future has been transformed into a contingent sphere not only of human potential, opportunity, influence but also of obligation and responsibility. The once privileged access to futures becomes an individual and collective duty. Finally, the nature of the future has changed with the shift to modern, post-Enlightenment methods of telling the future. Beyond phenomena that continue from the past or recur on a cyclical basis, the embedded and embodied, contextually specific and uniquely occupied future has been supplanted by an open abstract realm that is yet to be created, colonised and commodified. The task of futurologists, therefore, is to aid not efforts to know that future but rather individual and social endeavours to choose wisely from a spectrum of options and preferences with their associated potential effects. While contemporary society is in severe need of such aid and assistance, the situation is far more complex and intractable than even the most sophisticated of these analyses and methods allow for. It is this complexity I want to open up for consideration in the last part of this paper.

Coming Full Circle: Knowing Produced Futures that have yet to Materialise

With science, as I show in other working papers on this project, large spheres of social uncertainty have been tamed and their threats contained. On the basis of more secure footings, the pursuit of progress became not just a possibility but an almost compulsive endeavour. As Max Weber (1969/1919) suggests in his seminal essay ‘Science as a Vocation’, the relentless pursuit of progress became part and parcel of the more general and all-embracing rationalisation of social life with its paradoxical and often irreconcilable outcomes and the associated tendency to undermine the original intent behind them. In this essay Weber (1969/1919: 137-8) argues that science is chained to progress and the competitive search for the next innovation. Importantly, he shows how this quest for progress has the paradoxical effect of *reducing* rather than increasing the certainties and securities that are being sought. Today this diminished stability is evidenced and felt in all spheres of social life. Trusted structures are disintegrating, reliable continuity evaporating: the job for life, the company for the next generation, the security of energy supplies. The uncertainty that accompanies social change has emerged as one of today’s most reliable certainty. As this uncertainty increases, furthermore, our knowledge of the future is being continuously foreshortened, compressed and reduced to the present while the effects of our activities extend ever further into the distant beyond. As latent processes these time-space distantiated implications of past and present practices are real if not visible and material in the conventional sense. As virtualities they are affecting all they come in contact and connect with both on earth, in our stratosphere and the cosmos. Not just ‘big science’ and considerations about dumping our nuclear waste in the further reaches of the known universe but the humble fridge, the trip to the supermarket, the holiday on distant shores, all contribute to the expanding gulf between our ever decreasing knowledge of the future of our making and the vastly increasing time scale of our actions’ effects. Refuge to ‘futures in the mind’ is clearly not an appropriate solution, although recourse to imagination is. The ‘realness’ of our futures in the making, I want to stress, however, is different from the one alluded to when Wendell Bell (2005/1997: 76) suggests that ‘present possibilities of the future are real’. Bell has in mind ‘dispositionals’ usually recognizable by the suffix ‘able’, ‘ible’ and ‘uble’, which tend to describe possibilities. An example would be that glass would break if was dropped. The *condition* of its breakability is real irrespective of whether or not the glass is dropped. Thus, for a glass goblet breakability is an unrealized and dormant ‘real present possibility for its future’. Process futures of our making which constitute latent future presents, unlike the unrealized disposition of the glass goblet, are already under way; it is therefore no longer a question of choice (or accident) whether or not the real disposition is going to be actualized.

To understand the distinctiveness of futures in the making, and to appreciate why neither prediction nor engagement with probable, possible and preferable futures are sufficient to know and engage responsibly with socially produced futures we first need to return to the distinction between *facta* and *futura*, that is, between the already accomplished present and past which eludes our influence and the realm that is presumed open and empty, thus amenable to our design. Like all dualisms this distinction is a crude and static simplification whose specific framing of the issues brackets and thus bypasses the temporal complexity of the contemporary condition on a number of counts:

First, it misses the ‘factuality’ of past futures that are in progress, futures already under way in our present, set in motion but not visible because they have not yet materialised into empirically accessible phenomena. Prominent examples would be the long-term effects of radiation, chemical pollution and global warming, that is, of processes already in progress that have not yet materialised into *facta* in the conventional sense. Clearly, such processes are neither mere aspects of our imagination nor territories fully open to our influence, power and desire. They may be knowable as partial past facts and projectable continuity from the past. Their existence may constitute, for those seeking to know, an assemblage of near certainties, contingencies, constraints, virtualities, uncertainties, indeterminacies and ‘unknowables’. Furthermore, they may be recognisable to our bodies at the cellular level, our cells having absorbed and incorporated some of these empirically inaccessible features of reality, setting in motion invisible processes that will emerge as cancers, hormone disruptors and evolutionary mutations sometime, somewhere.

Secondly, the distinction creates an illusion of the future as empty vessel to be filled or an open territory to be occupied and colonised. The distinctiveness of this emptied out future will occupy us extensively in past and future research papers on this futures project where I will show that the contemporary future is always already occupied with the latent outcomes of choices, desires, decisions and actions of predecessors and contemporaries. Unlike the pre-set and ‘occupied’ future which was the subject matter of divination the contemporary future of prediction, projection, planning and production is a ‘territory’ in which each generation is both trespasser *and* temporary tenants as well as a temporal realm where past, present and future materiality, processes, patterns and knowledge practices intermingle and interpenetrate.

Thirdly, it fails to differentiate between efforts to know *future presents* and *present futures*. Both pertain to *future* rather than *facta*. The difference, however, is essential if we want to grasp what distinguishes forms of divination from prediction and futurological approaches. Thus far, the scientific mode of inquiry has no tools with which to engage with future presents. Futurology, in contrast, does have appropriate tools, such as scenario planning, horizon scanning or back-casting, all of which place the investigator’s object of inquiry in the future present. From that vantage point, in turn, futurologists seek to devise the means and paths to reach desired end states. While the importance of these methods must not be understated, it needs to be acknowledged that those future presents, with few exceptions such as Bell’s (2003/1997) dispositionals, are not conceived as *facta* but as products of the imagination only. That is to say, with few exceptions, the future presents of futurology are predominantly conceived as aspects of mind. They are not addressed as (virtual) material reality in a state of process and latency, as outlined in the first point above. Thus far, therefore, it seems as if only prophets, diviners, shamans and astrologers had sought the tools and means to connect with non-materialised yet real specific, embedded and/or embodied future presents. Although I am not suggesting that we should therefore resurrect any or all of the divinatory practices, I want to argue that to re-visit those traditions would be advantageous, since it would allow us to explore which, if any, features might be helpful to the contemporary endeavour to know and foretell the produced virtuality of latent future presents that are already under way but have not yet materialised as symptoms, not yet taken on empirically accessible form.

From the above it becomes clear that today a fourth future requires our urgent attention. In addition to probable, possible and preferable futures there is a need to know produced futures of our making. This, as I have indicated, requires different methodological tools, different assumptions and a different temporal base for our knowledge. It entails that we re-engage with *future presents*. Much of the research on this futures project is an attempt to come to terms with this new task which arises from the contemporary condition and for which we have no precedents and no appropriate past or present models to guide our efforts. Before we are ready to consider that task on the basis of future oriented practices, however, we need first to reflect in more detail than has been possible in this paper on the conceptual underpinnings and philosophical bases of approaches to knowing the future that have been discussed above². This will enable us to appreciate both the depth and the breadth issues and problems addressed in these pages.

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² See Groves (2005) Briefing 7 and working paper 'Living and Abstract Futures in Philosophy' www.cardiff.ac.uk/soesi/futures

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