ARTICLE

.67

Steps Toward an Explicit Ontology of the Future

Roberto Poli
University of Trento
Italy

Abstract

After decades characterized by diminishing interest in the theoretical underpinning of futures studies, the past few years have seen the onset of a new concern with the foundation of futures studies. Interestingly, recent discussion has not been limited to the epistemological bases of futures studies but has also begun to address the problem of its ontological grounds. The paper discusses some of the elements of ontology that should become part and parcel of the set of categorical tools that any working futurist should have at his or her disposal, such as the theories of latents and levels of reality.

Keywords: Facta, futura, disposition, latent, levels of reality, causal layered analysis

Introduction

During the past fifty years, futures studies have assumed an increasingly explicit professional nature. Practices have become more tailored to the needs of customers and methods have become more robust. On the other hand, theories able to support and guide practice have remained somewhat underdeveloped, as shown by the finding that most practitioners still adhere to the distinction between *facta* and *futura* drawn by Bertrand de Jouvenel in the 1960s (de Jouvenel, 1967).

While the difference between *facta* and *futura* has the merit of signaling a clearly perceivable difference, we shall see that it is seriously problematic. The issue is not only that the *facta/futura* dichotomy is too primitive a distinction to provide a basis for the field of futures studies, but also that it wrongly suggests that the future is only a matter of mental habits, be these positive expectations or fears. Wendell Bell's subsequent articulation of the *facta/futura* distinction adds 'dispositions' to *futura* (Bell, 2003). Dispositions are situations that may become actual if properly activated. With the introduction of dispositions, *futura* are no longer confined to cognitive, mental and emotional attitudes, they also become a problem of reality. *Futura* are thus split between *futura* connected to expectations, images, hopes and fears – in short, cognitive aspects – and other *futura* con-

nected to the structures of reality, be these active or inactive, the latter being ready to be released when suitable triggers are activated.

Dispositions are the simplest case of latents, those features of reality embedded in it beneath its surface. Latents are real forces and structures that work below the threshold of visibility. As soon as one realizes that some aspects of reality remain hidden and need appropriate methods to be detected and brought to light, one is forced to conclude that a theoretical framework is required which is more sophisticated than the simple distinction between *facta* and *futura*.

After decades characterized by diminishing interest in the theoretical underpinning of futures studies, the past few years have seen the onset of a new concern with the foundation of futures studies (Adam & Groves, 2007; Inayatullah, 2008; Walton, 2008; Malaska & Barbieri Masini, 2009; Mermet, 2009; Mermet, Fuller, & van der Helm, 2009; Krawczyk & Slaughter, 2009; Aaltonen, 2010). Interestingly, the recent surge of papers discussing various aspects of what may eventually become a theoretical framework for the field has not been limited to the epistemological bases of futures studies but has also begun to address the problem of its ontological grounds.

After reconstructing the main 'classical' efforts to establish futures studies as a legitimate academic research field – something unlikely to succeed without at least *some* underlining theory – the present paper discusses the most relevant *ontological weaknesses* of the recent debate.

The First Studies on the Future

The following highly simplified reconstruction of the origins of futures studies starts after the Second World War. After the beginning of WWII, the first efforts to establish the discipline are possibly those of Ossip Flechtheim, a German philosopher who already in 1943 sought to establish *Futurologie* (Flechtheim, 1943) as an applied research field aimed at eliminating wars and fostering peace, stabilizing population growth, eliminating hunger, poverty, and exploitation, democratizing states and communities, halting the exploitation of nature, and creating a new *homo humanus* (Ketonen, 2009). Furthermore, Flechtheim proposed to *teach* the future by establishing suitable courses (Flechtheim, 1966; Masini, 2009).

A second figure to cite is Gaston Berger, the founding father of the *prospective*, the French version of futures studies. Berger began by noting that the constant acceleration of technological and social changes thwarts all efforts to extrapolate forecasts from analysis of present and past situations. The most relevant question to be asked is not how to forecast the future, but how to prepare ourselves better for a constantly changing world, and how to choose the courses of actions that may achieve our preferred objectives (Cournand & Levy, 1973). Changing the focus from forecasting to being ready for future challenges implies that the capacity to deal with new situations and realize accepted values is more important than producing correct forecasts. Forecasting as extrapolation from the past is replaced by the capacity to orient and reorient oneself in real time, to choose values, and especially to decide proactively, that is to say, in a manner such to bring about the changes desired. According to Berger, the future is already embedded in the present and it can be discerned provided we focus on "future-bearing facts".

In the United States, the Rand Corporation began to study future-related methods systematically in the 1950s. In fact, Rand is well known for having incubated a variety of still widely used methods, such a Delphi panels and scenarios. Less well known is that under the direction of John Williams, the mathematical division at Rand "became infiltrated by philosophers," among whom Nicolas Rescher deserves special mention (Rescher, 1998, p.28).

The untimely death of Berger, the demise of Flechtheim, the subsequent shift of Rescher's attention to other more academically accepted topics, and the prevalently technocratic orientation of American futures studies were all factors that led to the rapid conclusion of this early phase in the history of futures studies. While this very brief outline of the beginning of futures studies should certainly be expanded, I have mentioned these few facts because they show that philosophers performed a role in the initial phase of futures studies of much more importance than most contemporary practitioners seem willing to admit. It may well be that the time is ripe for philosophers to return to the fray and contribute to the further development of futures studies.

In the meantime, the economist Bertrand De Jouvenel published a book which is now a classic in the field, and the discussion moved in a different direction.

Facta and Futura

In 1961 Bertrand de Jouvenel published one of the great classics of futures studies, translated into English in 1967 as *The Art of Conjecture* (de Jouvenel, 1967), in which he introduced the distinction between *facta* and *futura*. He noted that science deals with facts, things that have already happened and for which reasoned information and data can be collected about them. Science can eventually extrapolate from facts and is able to develop subsequent predictions. On the other hand, *futura* proper, what are still to happen, what do not present past data that can be collected and analyzed, do not pertain to science. There is consequently no science of *futura*. If facts are real, *futura* cannot but be irrealities. When one speaks of *futura*, one does not speak of facts, but rather of cognitive products, ideas, expectations, hopes or fears. De Jouvenel forcefully defended the deep divide separating *facta* and *futura* and repeatedly claimed that there is no science of *futura*.

The difference between the strength of *facta* and the evanescence of *futura*, as characterized by de Jouvenel, explicitly raises the question of the scientific status of futures studies. How is it possible to seriously study something that apparently lies outside the boundaries of science? Well, it cannot be done. The best one can do is to develop specific techniques – following the path already opened by architecture or medicine – or *ad hoc* practices – following the path opened by the art of advertising (the contemporary version of rhetoric) or *counseling*. The title itself of de Jouvenel's book – *The Art of Conjecture* – explicitly signals that its subject topic is not science – that is, knowledge – but instead something that appears to be more closely connected with a kind of intuitive vision.

If the field of futures studies is grounded on these premises – as it has been for fifty years – it is not surprising that most of those active in the field have no other choice than to adopt an overtly pragmatic point of view.

Dispositions

De Jouvenel's clear distinction between *facta* and *futura* became less clear when Wendell Bell introduced the notion of *dispositions* (Bell, 2003, p.76). Bell's move was a major leap forward, because dispositions have an ontological nature and they are far from being cognitive artifacts. Otherwise stated, dispositions are facts with an anchor in the future; they are facts that can happen if the relevant circumstances are triggered. A disposition is the capacity of sugar to melt in water or the capacity of glass to break when it falls on the floor. It may well happen that a given pinch of sugar will never come in contact with water or that the glass will never fall to the floor. The possibility, however, that the sugar will be mixed with water, or that the glass will fall, is always there, because it is a possibility structurally embedded in the nature (i.e., composition) of sugar and glass. Interpreted in this way, these kinds of *futura* constitute a specific category of facts: those that may become actual even if they are not presently so. More than physical-based dispositions, the dispositions most relevant to futures studies are those connected to the capacity of individuals, groups and entire societies to change, to become different. What matters most for our purposes here is that these capacities can be considered effective components of real entities, whether they are in a state of active, explicit manifestation or whether they are in a state of latency, present beneath the surface of things and ready to manifest themselves if the appropriate circumstances intervene to trigger them.

There is no reason to assume that all possibles are dispositions. Some possibles are indeed hopes, fears or intuitions, and they can either be inchoate and still incipient cognitive modes or already articulated modes ready to become explicit stances. The fundamental step forward taken by Bell clarifies that the past, present and future are reciprocally linked together, that there are structures connecting them, and that these structures are present even when they have not been explicitly activated. Not everything real is fully displaced in front of us. There are reals that are there even if they are in a dormant mode.

Levels of the Present

Dispositions are present facts able to condition the future. The main consequence arising from the introduction of dispositions is that attention shifts to the present and its structures. Besides Bell's proposal, the past few years have seen a variety of others centred on the idea that a variety of *futura* are included in the present as latents.

Richard Slaughter and Sohail Inayatullah have classified futures studies according to their levels of depth. According to Slaughter, analyses of the future proceed from the utter superficiality of *pop futurism*, to *problem oriented* studies, broadly anchored in the work of sociologists and economists, to *critical* or *activist* proposals (Slaughter, 2004).

Subsequently, Inayatullah has deepened and systematized the same overall framework with his Causal Layered Analysis. Put briefly, the guiding idea is that the present is characterized by phenomena working at different levels of depth, duration and visibility. The most superficial phenomena are also the most easily visible and short-lived ones. Deeper phenomena are less immediately visible and have greater temporal iner-

tia; they usually last longer. Inayatullah distinguishes four levels of phenomena, respectively called 'litanies', 'social causes', 'worldviews' and 'myths'. Fashionable behaviors, styles, and in general the most variable social phenomena, pertain to the level of litanies. By contrast, myths concern those aspects of social reality that behave as constantly active forces and raise the greatest resistance to modification. Litanies are superficial, short-lived, and visible. Myths are deep, almost permanent, and they tend to be invisible. Between the two extreme cases of litanies and myths, Inayatullah places social phenomena and worldview. The former are structural phenomena, governed by forms of social causality, while the latter are general *Weltanschauungen*, close to ideologies (Inayatullah, 2004).

That Causal Layered Analysis is still in an initial phase of development can be seen by the sharp difference between Inayatullah's description of the internal structure of CLA (as summarized in the previous paragraph) and his description of its applications, which usually resort to a different conceptual framework. To provide a recent example, the analysis of the "high rate of medical mistakes" case presented in (Inayatullah, 2008) is focused on the structural frame articulated into the differences between the individual (the doctor), the organization where s/he works (the hospital), and the overall reference field (medicine). Whilst the two frames are not contradictory, they are not the same conceptual frame either.

Both Slaughter and Inayatullah depict social reality as structured on different levels of depth. Slaughter tends to read the various levels epistemologically: what is superficial or deep for Slaughter are the analyses or the theories developed to understand phenomena. Inayatullah, on the other hand, tends to read the different levels ontologically: it is reality itself that is articulated between more superficial and short-lived phenomena and deep and long-lived phenomena. Inayatullah's version of the theory of levels of reality focuses on aspects that no other ontological theory of levels of reality has considered. For this reason it would be interesting to inquire as to how his theory can be integrated with other theories of levels of reality, such as those developed by Lloyd-Morgan, Alexander, Husserl, Ingarden, Hartmann, or myself. I shall briefly present some aspects of my theory of levels in the "Levels of Reality" Section below.

The Present

Although the terminologies, scientific styles, and problems discussed are markedly different, it seems apparent that many scholars actively working in futures studies – those mentioned in the previous section being among the best-known – are converging on the thesis of the thick present. Even if the expression "thick present" may have not been used by any of them, the underlying problem appears to be well captured by this expression.

Put briefly, the guiding intuition is that the present can no longer be considered a kind of durationless interface between the past and the future, as an infinitely thin boundary between what has been and what will be. On the contrary, the idea is gaining acceptance that the present has both some duration and some depth – and therefore a rich and multifariously complex series of structures. To paraphrase Shakespeare, one is tempted to say: *"there are more things in the present, Horatio, than are dreamt of in*

your philosophy".

The present deals with what is experienced as contemporaneous, as what constitutes a unit and in some sense happens together. For instance, the "summer 2010 fashion", or the "second Clinton presidency". The unit "summer 2010 fashion" connects to similar units such as "winter 2010 fashion" and "summer 2011 fashion". Similarly, the "second Clinton presidency" connects with the "first Clinton Presidency" and the "first G.W. Bush presidency". The first series of units generates a history of fashion, while the second series of units composes the list of Presidents of the United States.

The mentioned series of units are but the simplest cases of rhythms. A general theory of the present should include natural and social rhythms, both visible and latent. Rhythms follow approximately comparable patterns. Not all rhythms are mesoscopic, however: seasonal changes are, but glaciations are not. Some rhythms are too slow or too fast and one cannot detect the rhythms beyond their outcomes. Furthermore, most rhythms interact and resonate with each other. The seeds of the future are present not only in our expectations but also in the variety of natural and social rhythms that *are* reality itself – and perhaps especially in those that are less easily accessible.

Coming back to the simpler cases of fashions and presidencies, their series do not exclude further levels of temporal organization of the respective thick presents. In fact, finer distinctions, either formal (may 2010) or informal (the beginning of), are always embedded in them.

As far as psychological data are considered, the average duration of the psychological present lasts 700ms ca. Things are more complex with the social forms of the present because there are many of them. In fact, the social types of the present can last from a few seconds (interactions between people) to a few centuries (societies, cultures, Weltanschauungen). This shows why distinguishing different types of social presents is necessary.

Some kinds of thick present have a fixed duration, many more have a variable duration (the psychological present lasts from 200 ms ca. to 3000ms ca.). Furthermore, the present includes both a living memory of what has happened and an anticipation of what is going to happen. All this only scratches the surface, however (Poli, 2007; 2009; 2010a).

Apart from the structures embedded into the duration of the present, the other aspect characterizing the thickness of the present is its multilayered structure (what was above called the 'depth' of the present). Some of the layers of the present may be more visible; others may be more deeply embedded in its structures and for this reason may require specific efforts to be brought to light. Nevertheless, both contribute to the reality of the present. I shall differentiate them by distinguishing between *visible* and *latent* aspects of the present. In no way are latent aspects less real than visible ones. According to the terminology proposed here, latent aspects of the present refer to specific families of facts, dimensions of reality which are as objective as any other.

Visibles

There are at least two types of families of visible facts: usual facts, those well

known to any of us, and what Gibson, following Lewin and Koffka, called *affordances* (Gibson, 1979). Affordances are as visible as ordinary facts. The difference between them is that affordances are active properties of an object or a situation. A solid surface solicits us to walk on it; a ravine or a cave in the rock solicits us to look for shelter; a handle solicits us to grasp it in a suitable way. Affordances invite us to act in a given way. According to the original theories of Lewin and Koffka, affordances are not limited to properties of objects, however. They have the capacity to link *different types of information*, such as when one experiences yellow as shrill, or black as sad, or as when a person is perceived as aggressive, independently of what s/he explicitly says. Similarly, the capacities of situations to be relaxing, boring or exciting are connected to affordances. While the latter, more complex cases are subject to cultural conditionings and therefore present some variability, two aspects are of particularly relevance here. First, cultural differences notwithstanding, underlining invariant properties emerge. Second, not everybody has the same capacity to perceive affordances – to anticipate, that is, their outcome. Some of us are more open than others, some are able to see more affordances than others, and some see them more clearly and correctly than others. Independently from individual variations, an important distinction between individual human beings and institutions is that institutions seem unable to perceive affordances. As a tentative explanation of the difference between individuals and institutions, one may point out that affordances emerge in the specious present – the present, actual unfolding of a mind – while institutions certainly do not have minds, and their temporal rhythms are different from those of minds.

Older Contributions to the Theory of Latents

Latents constitute a dimension of reality usually hidden from sight. The problem of latents surfaced repeatedly within different research fields during the twentieth century. Apparently, however, latents have never become a fully accepted and respectable research topic.

Latents have been studied by psychologists and sociologists, especially those employing the concepts of system and field. Parsons, Sorokin, Coutu, and Dewey are some of the best-known scholars that have used the concept of latent. The first of the five-volume book *Understanding Conflict and War* (Rummel, 1975-1981), discusses latents in some depth. The recent *Future Matters* adds further important contributions (Adam & Groves, 2007).

However, latents have received the most extensive attention from philosophy. Without any claim to completeness, some contributions deserve at least rapid mention. The first and perhaps also the most interesting is the distinction between *natura naturans* and *natura naturata* drawn by Giordano Bruno and subsequently developed by Baruch Spinoza. Put briefly, the distinction is between reality as a process and reality as a product. *Natura naturans* is an unfolding force and the very process of its unfolding leaves traces, the products of *natura naturata*. These products are the frozen – reified – versions of natural processes which continue to unfold following their own internal logic.

Closer to today, thinkers such as Husserl, Bergson, Hartmann, Peirce, Whitehead

and Popper have all contributed to the understanding of latents. Immediately after them, the thinker who has possibly gone most deeply into the subject has been Ernst Bloch, particularly in his *The Principle of Hope* (for a brief introduction see Poli, 2006b).

Latents

From a systematic point of view, latents are the dimensions of reality below the surface of visible facts. The following five classes of phenomena contribute to the generic category of latents:

- dispositions (these become visible when appropriate circumstances occur);
- seeds of the future (usually acknowledged only *ex post*);
- constraints imposed by social relations and their self-referential reproduction;
- constraints imposed by levels of reality;
- constraints imposed by *Weltanschauungen* and myths.

The first two types have already been briefly discussed (sections 2 and 4), as well as the fifth one (section 5). I shall now discuss the third and the fourth types, in reverse order. Before that, however, it should be explicitly noted that the series of latents listed above is only a preliminary proposal, to be further developed in subsequent papers. For this reason, I call it a "list" of latents and not a "classification" of latents.

Levels of Reality

The problem of levels of reality lies between two main questions. The first of them asks how to distinguish among the main families of entities (material, including physical and biological entities; psychological, including perceptual, emotional and representational entities; and social, including economical, political, legal, and cultural entities). The second question asks how to understand their connections and influences. The theory of levels of reality is another of those theories that periodically return to the scene, apparently without being able to leave lasting traces. Among the first proponents of a theory of levels were Spencer, Lloyd Morgan and Alexander (for a survey, see Blitz, 1992). Remarkably more articulated are the treatments by Husserl, Ingarden and Hartmann. My own work initially relied on the latter group of scholars, but then pursued its own path (Poli, 2001; 2006a; 2006b; 2007). Put very briefly, the main difference between my theory and, say, Hartmann's is that my theory substitutes the linear order of levels devised by Hartmann (inanimate, living, psychological and spiritual) with a triangular structure where the material stratum (including both inanimate and animate beings) behaves as a basis from which both the psychological and the social strata co-evolve.

The main problem concerning the theory of levels of reality is the tension between the unity of reality and the many, often mutually inconsistent, frameworks (including all the sciences, but not necessarily only them) developed to understand some of its aspects. Since we do not have something like a science of sciences with which to integrate the many outcomes arising from the different sciences, it appears

that the problem of coordinating and synthesizing the latter types of information (and many more besides) can only be left to philosophy. The theory of levels of reality deals precisely with this general problem of coordination and synthesis. For details I refer the interested reader to the references given.

Conclusion

To summarize the foregoing discussion, I conclude by saying that the present is articulated along different dimensions. Some dimensions of the present include the actively remembered past and imagined futures. Other dimensions instead include natural and social rhythms, both visible and latent. We have seen that the first tentative steps taken towards ontology by introducing dispositions had to be supplemented by the more articulated theories of anticipation and latents. The net consequence of all this is that one cannot escape from ontology.

I am far from claiming that futurists should become full-fledged ontologists. At a time when most philosophers have lost the 'taste' for ontology, asking scholars and practitioners from other fields to become better ontologists than professional philosophers is obviously not feasible. What I am instead saying is that *some* elements of ontology should become part and parcel of the set of categorical tools that any working futurist should have at his or her disposal.

Essentially, what is needed is a basic understanding of at least two ontological theories, namely the theories of latents and levels of reality.

Correspondence

Roberto Poli
University of Trento, Research professor
Department of Sociology and Social Research, 26 Verdi strreet, 38122 Trento (Italy).
Email: roberto.poli@unitn.it

References

Aaltonen, Mika. (2010). *Robustness: Anticipatory and Adaptive Human Systems*. Isce Publishing.

Adam, Barbara, & Chris Groves. (2007). *Future Matters*. Leiden, Belgium: Brill.

Bell, Wendell. (2003). *Foundations of Futures Studies: History, Purposes and Knowledge: Human Science for a New Era Volume 1*. New Brunswick & London: Transaction Publishers.

Blitz, David. (1992). *Emergent Evolution*. Dordrecht, The Netherlands: Kluwer.

Cournand, André, & Maurice Levy. (1973). *Shaping the Future: Gaston Berger and the Concept of Prospective*. New York: Gordon and Breach Science Publishers.

de Jouvenel, Bertrand. (1967). *The Art of Conjecture*. London: Weidenfeld and Nicholson.

Flechtheim, Ossip. (1943). "Futurologie." In *Historisches Wörterbuch der Philosophie*. Basel, Switzerland: Schwabe & Co Verlag.

Flechtheim, Ossip. (1966). *History and Futurology.* Meisenheim am Glan, Germany: Verlag

Anton.
Gibson, James J. (1979). *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin.
Inayatullah, Sohail. (2004). *The Causal Layered Analysis (CLA) Reader*. Tamsui, Taiwan: Tamkang University.
Inayatullah, Sohail. (2008). "Six pillars: Futures tThinking for transforming." *Foresight, 10*(1), 4-21.
Ketonen, Oiva. (2009). "Knowing about the future." In Malaska, Pentti, & Eleonora Barbieri Masini, *Futura, 28*(1), 28-35.
Krawczyk, Elzbieta, & Richard Slaughter. (2009). "New generations of futures methods." *Futures, 42*, 75-82.
Malaska, Pentti, & Eleonora Barbieri Masini. (2009). "Philosophical essays of knowledge of the future." *Futura, 28*(1), 3-96.
Masini, Eleonora. (2009). "Luis de Molina as a precursor of the basis for philosophical and ethical thinking in futures studies." *Futura, 28*(1), 6-14.
Mermet, Laurent. (2009). "Extending the perimeter of reflexive debate on futures research: An open framework." *Futures, 41*, 105-115.
Mermet, Laurent, Ted Fuller, & Ruud van der Helm. (2009). "Re-examining and renewing theoretical underpinnings of the futures field: A pressing and long-term challenge." *Futures, 41*(2), 67-70.
Poli, Roberto. (2001). "The basic problem of the theory of levels of reality." *Axiomathes, 12*(3-4), 261-283.
Poli, Roberto. (2006a). "The theory of levels of reality and the difference between simple and tangled hierarchies." In Minati, Gianfranco, Eliano Pessa, & Mario Abram, *Systemics of Emergence: Research and Development*, 715-722. New York: Springer.
Poli, Roberto. (2006b). "Levels of reality and the psychological stratum." *Revue Internationale de Philosophie*, 163-180.
Poli, Roberto. (2006c). "The ontology of what is not there." In Malinowski Jerzy, & Andrzej Pietruszczak, *Essays in Logic and Ontology. Essays dedicated to Jerzy Perzanowski.* Amsterdam: Rodopi, 73-80.
Poli, Roberto. (2007). "Three obstructions: Forms of causation, chronotopoids, and levels of reality." *Axiomathes, 17*(1), 1-18.
Poli, Roberto. (2009a). "The complexity of anticipation". *Balkan Journal of Philosophy, 1*(1), 19-29.
Poli, Roberto. (2009b). Anticipation and conflicts. *Submitted.*
Poli, Roberto. (2010a). "The many aspects of anticipation." *Foresight, 12*(3), 7-17.
Poli, Roberto. (2010b). *The Complexity of Self-reference. A Critical Evaluation of Luhmann's Theory of Social Systems.* Trento, Italy: University of Trento.
Rashevsky, Nicolas. (1954). "Topology and life: In search of gGeneral mathematical pPrinciples in biology and sociology." *Bulletin of Mathematical Biophysics, 16*, 317-348.
Rescher, Nicholas. (1998). *Predicting the Future: An Introduction to the Theory of Forecasting*. New York: State University of New York Press.
Rosen, Robert. (2000). *Essays on Life Itself*. New York: Columbia University Press.
Rummel, Rudolph J. (1975-1981). *Understanding Conflict and War*, 5 volumes. New York:

J. Wiley and Sons.
Slaughter, Richard A. (2004). *Futures Beyond Dystopia: Creating Social Foresight*. London & New York: Routledge Falmer.
Walton, John S. (2008). "Scanning beyond the horizon: Exploring the ontological and epistemological basis for scenario planning." *Advances in Developing Human Resources, 10*(2), 147-165.