Cosmos & History at its foundation embraced Alfred North Whitehead’s proclamation that the role of universities in general and philosophy in particular is ‘the creation of the future, so far as rational thought, and civilized modes of appreciation, can affect the issue.’ Whitehead believed that humans, including scientists and philosophers, are creating the future whether they acknowledge this or not, and whether or not they accept responsibility for what they are creating. A major problem with intellectual life in the modern world is that scientists and philosophers do not acknowledge they are playing this role and do not consider the implications of the ideas they are developing and the effects of these ideas. Largely, this is because they tacitly accept a Cartesian or Hobbesian world-view according to which humans as conscious beings are either external to the physical world or nothing but epiphenomena generated by bits of matter in motion and the forces of interaction between them. For Cartesians, life is not a matter of creating the future but rearranging matter in the physical world (which includes animals and lesser human beings) to serve extrinsically defined purposes. For Hobbesians, the laws of physics ultimately determine all that people do or think. Any sense of responsibility for their actions or what they produce has to be an illusion, and even consciousness is claimed by some to be an illusion. People are simply machines moved by appetites and aversions inevitably striving to dominate others; if possible, to have the entire world fear and obey them.

Those who took consciousness, freedom of will and responsibility seriously pointed out the absurdity of the Hobbesian tradition because it denies the possibility of gaining scientific knowledge on the basis of which these ideas were being rejected. With Kant’s critical philosophy, a new Copernican Revolution was called for, putting human consciousness at the centre of the cosmos as in some sense its

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creator. This view was embraced in the humanities which maintained their claims to knowledge up until the third quarter of the Twentieth Century. Defenders of the humanities argued that history is a form of knowledge at least as important as anything produced by the sciences. After Kant, Hegel, Wilhelm Dilthey, Benedetto Croce, Edmund Husserl, Robin Collingwood and Alasdair MacIntyre, among many others, argued this point.

However, the humanities, which originated in the Florentine Renaissance, had been challenged by both Descartes and Hobbes, and Hobbes had characterized knowledge as merely an instrument for making predictions and controlling the world. Such ideas were embraced by those attempting to model economics on physics who built on Hobbes’ conception of individuals and society. With Darwin and those who advanced the synthetic theory of evolution, Hobbes’ ideas, along with mainstream economics, were defended against the humanities more successfully. The Darwinian revolution was a major inspiration for the establishment and development of the human sciences, most importantly, sociology and psychology. The term ‘sociology’ was coined by Auguste Comte, who also founded positivism. Herbert Spencer, who coined the phrase ‘survival of the fittest’ and allied himself with Darwin, then played a major role in its subsequent development. Extending Darwin’s work, sociobiologists in the 1960s claimed that living organisms, including humans, are machines (information processing cyborgs) organized for the reproduction of genes; that is, DNA.

Most philosophers fell in line behind science in the struggle between science and the humanities. Empiricists and positivists defended these developments as the advance of science. As Hobbes, and then following him, David Hume argued, the only true knowledge comes from science and mathematics. As Hume put it:

When we run over libraries … what havoc must we make? If we take in our hand any volume – of divinity or school metaphysics, for instance – let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames, for it can contain nothing but sophistry and illusion.²

This was the basis of Comte’s positivism. Reviving and reaffirming this doctrine, logical positivists, embracing developments in symbolic logic, dealt with the embarrassment of non-empirical mathematical knowledge by claiming that mathematics is merely a collection of tautologies.

Logical positivists, and more broadly, logical empiricists, claiming that there is a scientific method through which we are able to accumulated certain knowledge, were challenged not only by proponents of the humanities, upholding some form of

Idealism and according a privileged place to consciousness, but also by scientists and anti-positivist philosophers of science challenging orthodox forms of science and attempting to align the sciences and the humanities. This began with Herder, Goethe and the early Romantics, most importantly, Schelling, and has continued with efforts to develop and defend humanistic forms of the human sciences, and more radically, with efforts to transform the natural sciences to align them with the humanities. These were supported by philosophers influenced by Schelling such as C.S. Peirce, Henri Bergson and Whitehead and scientists influenced by them, such as C.H. Waddington, Ilya Prigogine and the biosemioticians.

The logical empiricists’ characterization of science and the scientific method were later demolished by historians of science and historically oriented philosophers of science, including Edwin A. Burtt, Gaston Bachelard, Ernst Cassirer, Alexandre Koyré, Karl Popper, Michael Polanyi, Norwood Russell Hanson, Stephen Toulmin, Thomas Kuhn, Imré Lakatos, and Paul Feyerabend among others. However, their work has been ignored within the humanities and by most philosophers concerned to defend the humanities. These turned to what came to be called Continental Philosophy (mostly French philosophy). Originally, Continental Philosophy was identified with various forms of Idealism, hermeneutics, phenomenology and hermeneutic phenomenology, but when French philosophers turned against these traditions in the 1960s and embraced structuralism, support for the humanities collapsed. This collapse is being celebrated as ‘posthumanism’ and is associated with the contraction of humanities within universities, often leading to the elimination of philosophy departments.

The original aim of the humanities had been to foster the development of people’s character and to provide the knowledge required for them to uphold and defend their liberty and to govern themselves. This required of people that they take responsibility for their actions and lives and the future of their communities. The humanities so conceived were entirely in accordance with the characterization of the role of the university and of philosophy as creating the future. The collapse of the humanities has been associated with the reduction of science to ‘technoscience’, simply a means to develop technology to control nature, including people, the triumph of managerialism reducing people to nothing but instruments for profit making, best achieved by putting them in a permanent state of insecurity, and the depoliticization of populations all around the world.

From this sketch of the history of the core ideas of modernity that Descartes and Hobbes bequeathed to us, did create the future, a future which is now the present. It can also be seen that the most important set of ideas involved in this creation, now form and structure what has become a global civilization. The world’s most powerful institutions, most importantly, transnational corporations and their
managers with the assistance of the institutions of States they have been able to subvert and transform to serve their own ends, embody these ideas in their organization and are determining the trajectory of civilization. And they are actively involved in imposing these ideas everywhere and crippling any opposition to them.

While the papers in this edition of *Cosmos & History* were not solicited for a special edition, they have a coherence by virtue of the efforts of contributors to understand and respond to the problems of current civilization. *Cosmos & History* has published six of the seven proceedings of the *Foundations of Mind* conferences. The reason for this is that, as Willis Harman pointed out in the introduction to *New Metaphysical Foundations of Modern Science*, mainstream science has been based on an ontology that ruled out a *priori* the possibility of accounting for the mind, and this underpins almost all the other problems in the culture of modernity. In the first article in this edition, ‘Reparsing Nature: The Bionoetics Framework and the Age of Magic and Wonder’, Séan Ó Nualláin, the main organizer of these conferences, has explained the significance of work in *Foundations of Mind*. He points out that this work is far more than advancing the science of consciousness or neuroscience since how we understand mind has implications for all human endeavours.

The articles immediately following Ó Nualláin’s piece focus on the consequences of the triumph of the culture of modernity. Enrico Beltrami in ‘Stephen Hawking and Machine Intelligence’ takes Hawking’s warning about the possible adverse consequences of new information technology as a starting point to warn of a far more problematic aspect of this technology. Humans transform themselves through the technologies they develop, and this new technology is generating an artificialized humanity, including artificialized science and artificialized nature, all dominated by artificial intelligence. While this might seem unproblematic and such warnings alarmist, Vincent Le in ‘The Decline of Politics in the Name of Science?’ draws attention to a debate between Nick Land and Ray Brassier. Land concluded from his understanding of the trajectory we are on that humans should stand aside to allow Artificial Intelligence as it is being advanced in capitalist societies to take over as the next stage in evolution. We should accelerate technocapitalism’s destructive trajectory. Le describes Brassier’s effort to show how these implications can be avoided by thinking through Land’s anti-humanism more consistently, following Meillassoux, and rejecting ‘correlationism’, the view that our beliefs about the world should correlate with the world as it is in itself.

The urgency of responding to the current state of civilization and its trajectory is brought home forcefully and more concretely by Michel Weber in ‘Degrowth: Technoscience and the Existential Stakes of a Political Heresy’. Facing up to the extent of global ecological destruction being wrought by the civilization of modernity, Weber argues that we have to implement degrowth, or we will not have
a future at all. This is a powerful statement of where we stand, and how imperative it is that we take action to drastically change the societies in which we are living.

The problem is, as Land concluded, it might be impossible to make the required changes and create a different kind of society. Underpinning Margaret Thatcher's claim that there is no alternative to neoliberalism, is the scientific materialist worldview bequeathed to us by Descartes and Hobbes and further supported by neo-Darwinism. The rest of the articles in this edition express the refusal to accept Thatcher's claim, or the worldview on which it is based.

Alain Badiou, who has endorsed the work of Meillassoux, has emerged as one of the most influential philosophers refusing to accept our existing order. Taking his stand in a grand philosophy based on mathematics, he has shown that even accepting the Pythagoreanism central to modernity there is still a place for events, most importantly, events of truth which challenge the complacency of those who simply accept the existing order and its supposed imperatives. Two contributors to this edition have focused on his work. Uros Kranjc in 'Logic(s) of the Value Form' explains how Badiou uses his philosophy to interpret and defend Marx's dialectics and his analysis and critique of the commodity form, the form value takes in capitalist societies, while Matthew McManus in 'The Political Thought of Alain Badiou' offers an admiring but ultimately critical examination of Badiou's metaphysics and its grounding in his politics.

Badiou was strongly influenced by Louis Althusser, who in turn embraced central components of the psychoanalytic theory of Jacques Lacan. Althusser and Lacan were part of the structuralist movement in France. Lacan was severely criticised by Cornelius Castoriadis for the low status he accorded to imagination, and correspondingly, for his excessive respect for the symbolic order as interpreted through structuralist semiotics. Castoriadis argued for a more fundamental break with mainstream thought, claiming that through the domination of science by ensemblist-identitarian, or ensidic, thinking, relying on operators of traditional logic and of mathematics, such as the principle of identity, non-contradiction, the excluded third, and so forth, it assumes that being consists of entirely discrete or separate elements neatly conforming to these principles. Ensidic thought cannot grasp the notion that there could be anything genuinely other than determinate being. Consequently it is incapable of acknowledging the radical freedom of humans by virtue of their radical imagination enabling them to reflect upon and critique all their inherited institutions, and to take responsibility for these institutions and their form, and to create forms that are radically new. That is, it denies the possibility of the quest for autonomy. In her study 'Auto-Poiesis', Maria Kli examines Castoriadis philosophical anthropology and ideas on psychoanalysis through which he attempted to account for the radical creativity of humans, thereby articulating the
So immense are the powers driving us to our destruction that it might seem futile to even discuss ethics. However, Jaime F. Cárdenas-García in ‘Information Ethics in the Information Age’ does just this. This is no ordinary invocation of ethics, however. The scientific materialist worldview has evolved since the Seventeenth Century, and a core concept to have emerged from this has been the concept of information. Not only is this concept seen to integrate thermodynamics, cybernetics and control theory, providing a more plausible reductionist account of living organisms and society, but it has become the core concept in information technology and AI. By defending Gregory Bateson’s redefinition of information as a ‘difference that makes a difference’, Cárdenas-García challenges reductionism altogether, and on this basis advances a radically different form of information ethics, and of ethics generally.

This very different notion of information (which has been embraced by the biosemioticians) brings into question the faith placed in mainstream science and technology as sole sources of knowledge and supports the restoration of the cognitive claims of the arts and the humanities. If we do take art seriously it is necessary to rethink how art, including poetry can function in society and have a political effect. In ‘Poetics of Public Space’, Burghardt Baltrusch analyses how new ‘forms of non-lyric poetry might represent the advent of a new public sphere, which is no longer exclusively formed by an idealistic, romantic tradition, but rather characterised by a hermeneutic ambiguity which suggests a reconfiguration of the subject and of poetic subjectivity.’

Philosophical justification for Baltrusch’s claims for the role of poetics in public space is also provided by equally bold claims of Berkay Ustun in his article, ‘In the Muddy Center: A Physics of Nonpropositional Thinking’. This offers a survey of and supports contemporary efforts to restore to human thought and language a wider realm of nonpropositional thought. This is presented as an updated Naturphilosophie against a restricted form of “naturalization” in the image of neural correlates characteristic of much of neuroscience. Drawing on Whitehead, Peirce, Bateson and biosemiotics, nonpropositional thought is understood as pertaining to a reconceived nature, so that human thought is seen as a further development of nature. The essay argues for a place for alternatives to propositional thinking ranging from poetry to nonstandard logical forms such as analogy.

This provides some justification for Arran Gare’s claims for the potential of philosophy and ethics to transform the way people live when they are related to the arts, most importantly, the forms of thinking developed within architecture. While acknowledging the apparent irrelevance of philosophical ideas and ethical philosophy in particular to influence how people actually live and act, Gare
endorses Max Born’s diagnosis of the problem - that ethics is no longer related to people’s work. In fact, the transformation of work into labour, lamented by Karl Marx in *The 1844 Manuscripts* and by Hannah Arendt in *The Human Condition*, where people are transformed into predictable cogs in the economic machine evaluated and judged in terms of their contribution to profitability of organizations, preparatory to their replacement by robots and elimination from society, allows no place for ethics in work. To challenge the corrosive effects of markets and managerialism requires a revival of respect for, and the virtues required for, real work (as opposed to what David Graeber characterized as unproductive ‘bullshit jobs’). To revive appreciation of work and to reveal the virtues required for this, Christopher Alexander’s philosophy of architecture is invoked. Here, building is understood as participating in the morphogenesis of nature, and to ensure that such morphogenesis augments life and makes a more beautiful world, it is necessary to cultivate in builders a ‘feel for the whole’ while working. This, it is argued, should be generalized to all work.

Such a dramatic transformation in the place accorded to work both supports and requires efforts to develop a new, environmentalist, polyphonic grand narrative to replace the monologic grand narrative of economic growth that now dominates the world, and also to overcome the fragmentation associated with the postmodern condition, furthered by postmodernists with their incredulity to all grand narratives. This call for a new environmentalist and polyphonic grand narrative is defended by Andrew Corsa in ‘Grand Narratives, Metamodernism, and Global Ethics’. Corsa defends this call and clarifies what it will entail through ‘metamodernism’, understood as a ‘structure of feeling’. This allows metamodernism so conceived to be advanced as a global ethics.

The notion of a polyphonic or dialogic grand narrative requires openness to and engagement with diverse perspectives. One of the most important efforts to advance such a dialogic grand narrative was Joseph Needham’s magisterial study of science and civilization in China. Aaron Grinter in ‘The Grand Titration: Revisiting the Work of Joseph Needham to Address Ethnocentricism in Contemporary Philosophy and Society’ draws attention to this work and to its significance, and to show whether and how Needham’s work can be used to overcome current problems engendered by the ubiquitous reach of Western culture. In the modern world in which culture is dominated by different branches of European civilization. China, India and Japan, while retaining much of their earlier cultures, have been transformed by assimilating European traditions of thought. Islamic civilization has been more resistant to European civilization (although still influenced by it) due to the long history of enmity and conflict with it. It is important therefore to appreciate Islamic thought in our efforts to create the future. Such an Islamic perspective is
provided by Mahommad Ali Tavana, Hamid Nasaj and Morteza Bahrani in their contribution to this special edition: ‘Reconstruction of the Sociopolitical Hierarchy in Farabi’s Utopia.

Challenging the scientism and domination of society by technoscience requires a radical examination and rethinking of not only the metaphysical assumptions of current science, but a rethinking of what is science. As Ilya Prigogine wrote in the preface to From Being to Becoming: Time and Complexity in the Physical Sciences, a work challenging the metaphysical assumptions of mainstream science, ‘we are in a period of revolution - one in which the very position and meaning of the scientific approach are undergoing reappraisal - a period not unlike the birth of the scientific approach in ancient Greece or of its renaissance in the time of Galileo.’ Prigogine and then more recently, Roberto Unger and Lee Smolin, have argued that one of the major problems of mainstream natural science is that it excludes real time. To comprehend what it is to be aware, sentient, conscious and a subject requires recognition of such time. If science is to accord with the humanities, then it is necessary to develop a form of science that acknowledges the reality of time. Ted Dace in ‘The Arrow of Time’, takes time as a fundamental property of nature manifest in our experience of the present as ‘now’, and shows how it is necessary to interpret developments in the physical sciences to acknowledge this.

This primordial temporality of existence is brought home in different ways by Agustin Ostachuk’s ‘The Evolution Concept: The Concept of Evolution’. Adding an important and generally overlooked dimension to Darwin’s theory of evolution, Justin Dominic Gaudry in ‘Liking What’s Good for You: Evolution, Subjectivity and Purpose’ revives an argument made by William James, that an implication of the theory of evolution based on natural selection is that subjective states have physical effects. They are causally efficacious. Consequently, far from being a triumph of materialist reductionism, Darwinian evolutionary theory forces us to accord a place to consciousness within nature in opposition to both Cartesian dualism and materialist reductionism.

This brings the issue back to the problematic relation between mind or consciousness and the body, including neurodynamics, and how the mind can be efficacious in the physical world. In ‘Downward Causation: Control Theory, Symmetry Breaking, Quantum Field Theory, and Neurodynamics’, David Bernal-Casas and Seán Ó Nualláin outline their integration of control theory and quantum field theory showing how this enables us to understand how consciousness or mind can influence the dynamics of the brain. They also examine the roots of current ways of thinking that have led science to assume an impoverished, disenchanted conception of the physical world in the Swiss Protestant theologian, Huldrych Zwingli. They suggest their work is a contribution to overcoming this heritage.
The two remaining articles are less radical in their offering, although they highlight major issues in current philosophy. In ‘Mathematizable Properties of Human Bodies in Relation to Meillasoux’s Discussion of Primary Qualities’, Martin Orensanz considers and offers a way around one of the major problems with Meillasoux’s project to show in opposition to Kantian philosophy and the ‘correlationism’ that it engendered (whereby it is seen as necessary to show how our beliefs correlate with external reality) that the real properties of things is their mathematizable properties which can be grasped through mathematics. At the same time this involves upholding the objectivity and significance of mathematics against both logical positivism and various forms of relativism and scepticism that have crippled intellectual life. Endorsed by Badiou for some of his claims, Meillasoux is now regarded as a leading French philosopher, and his status and what he is arguing gives some indication of the current direction of French philosophy. J. Mikael Olsson in ‘Hedonistic Utilitarianism and Feminist Politics’ argues that while feminists have not shown much interest in hedonistic utilitarianism, the doctrine that one should act to maximize pleasure and minimize pain, many of the policies advocated by feminists can also reasonably be advocated by hedonists. This is hardly a radically new ethical doctrine, although Olsson does reveal some of its radical implications.

The last piece in this special edition is a review essay on ‘Metaphilosophy and the Promises of Pluralism’ by Ralph Shain. Focussing on two recently published books, Søren Overgaard, Paul Gilbert and Stephen Burwood’s An Introduction to Metaphilosophy and the anthology Beyond the Analytic-Continental Divide: Pluralist Philosophy in the Twenty-First Century edited by Jeffrey Bell, Andrew Cutfrofello, and Paul M. Livingston, Shane offers a superb critical review of recent work in philosophy and of the state of philosophy generally. It should be evident to anyone who has anything to do with philosophy departments in universities, that philosophy is in crisis, and there has never been a more important time to reflect on what philosophy is and should be, especially if one takes seriously the ambitions staked out for philosophy by Alfred North Whitehead.