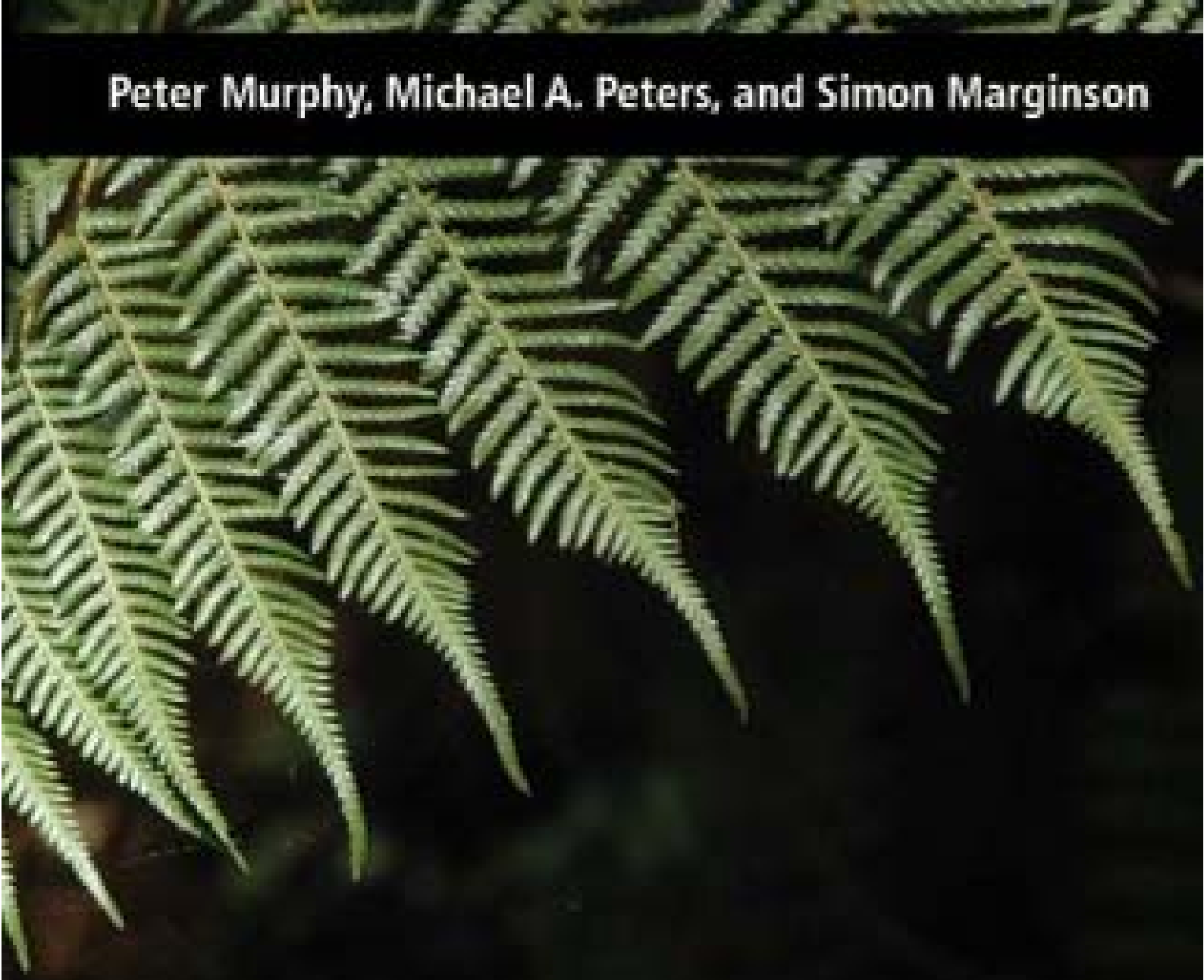
Peter Murphy, Michael A. Peters, and Simon Marginson



Imagination

Three Models of Imagination in the Age of the Knowledge Economy

ADVANCE PRAISE FOR **Imagination**

"This collective volume might have been titled the primacy of the imagination—it elaborates, articulates and almost perfects a theory of the creative act as imaginative re-creation. The contributors raise a wide variety of issues focused around imagination as social practice within the confines of contemporary societies as knowledge economies. For the three authors, the act of creative imagining is a self-perpetuating paradox which institutes new meanings and novel codes of signification. The act of imagination re-structures the human mind in order to face its creative performance and objectifying output. The writers quite firmly assert that imagination does not simply free the mind from the restrictions of the known and its social conditions, but it expands the limits of the known itself and institutes human presence as an act of continuing self-definition. From the ancient Greeks and Plato to the Romantics and the postmodern capitalist economies, this book explores the deep interaction between the need for novel ways of seeing and new practices of creative action. This is a meticulous, passionate and original exploration that simply redefines the parameters of the question."

Vrasidas Karalis, Associate Professor of Modern Greek, University of Sydney

"Who would want to demur from the sentiment that imagination is a marvellous thing? Do we not live in the age of creative industries, knowledge economies, cyberspace and post-industrialism? Romancing our *zeitgeists*, and believing in new signs and wonders is a perennial pastime of human societies. Much harder work is to think about imagination, collective forms of creativity and knowledge production. This is the signal achievement of *Imagination*. Its three authors do the hard work for us and in three different registers: first in foundational terms, that of thinking about imagination and creativity as collective knowledge innovation and production; second, by interpreting the history of imagination as the cumulative production of knowledge across cultures and ultimately as a global process; and third, in the age of cyber capitalism, understanding the transmission of knowledge via digital production and open sourcing of property. This kind of thinking is hard work but good writing that produces lucid critical insight. Murphy, Peters and Marginson demonstrate that critical analysis and foundational thinking can also be written with panache. This book is not only good to think with, but is also a pleasure to read."

Trevor Hogan, Senior Lecturer in Sociology, La Trobe University

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PETER LANG
New York • Washington, D.C./Baltimore • Bern
Frankfurt • Berlin • Brussels • Vienna • Oxford

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PREFACE

In this, the third of a series on creativity in the age of the knowledge economy, we focus on the dimension of imagination. Intellectual interest in the subject of the imagination has ebbed and flowed across the past three centuries. From Addison's 'The Pleasures of the Imagination' (1712) the topic passes to Burke and Hume and then to Lessing and Kant—and finally segueing via the latter two to Coleridge's *Biographia Literaria* (1817). The next significant surge of interest occurs in the 1930s, with the closely timed production of Dewey's *Art as Experience* (1934), Sartre's *The Psychology of Imagination* (1936), and Collingwood's *Principles of Art* (1938). The cachet of the term imagination ensures that it is mentioned now in passing often and with a certain casual awe. But as quickly as it is mentioned, it is dispensed with. Everyone seems to admire imagination and to reckon that being imaginative is a marvellous thing. The 'creative imagination,' which may be a tautology, is also highly rated. Nevertheless, actual explanations of what is the imagination are quite rare—and the whole business of creativity remains a bit of a puzzle.

In the first volume of this series, *Creativity and the Global Knowledge Economy*, we observed that the mind is a force of production. That which is discovered in the arts and the sciences is applied to economic and social processes—sometimes with spectacular effect. In many ways, as we noted, modern capitalism at its leading edge has become an aesthetic and scientific mode of production. The prototype of this, though, as we also pointed out, was already in place in the nineteenth century. From works in engineering and architecture to chemistry and biology to educational and social policy, the advancement of the arts and sciences is central in a modern society. The most talked-about entrant into the club of economic modernity today is China, who along with India, Brazil and a number of others is forging a second-tier of international economies. In the year 2000, the Chinese government made a deci-

sion not only to continue expanding its schools and universities, but also to commit large resources to develop internationally competitive research universities. That latter would seem to be practical proof of the centrality of knowledge creation in a modern economy.

Yet is it? In *Imagination*, we raise some doubts. A point that was made in *Global Creation*, the second volume of the current series, is returned to in the present work. This is that while it is all well and good to talk about knowledge economies and post-industrialism, it is not clear that knowledge *by itself* creates the kind of dynamism and energy typical of advanced societies at their most ebullient. Put another way—knowledge is a function of something deeper. Consequently, we should ask ourselves the question: where does knowledge come from? It is not evident that resources alone can create knowledge. Building institutes and campuses, and hiring staff, doesn't guarantee the creation of knowledge. Rather the source of knowledge is much more intangible. Knowledge is a function of imagination and thinking, not resources—even if it is true that a certain amount of free time and stimulating surrounds is required for sustaining both imagination and thinking.

After the recent 2008 world financial collapse, the Chinese government looked hard at its economic base and asked itself what kinds of industries should it encourage for the future. The answer was cultural and creative industries, that is, post-industrialism. Even with a still very low per capita income base across much or most of China, the government can see that economic and social prosperity requires going beyond brutal cheap industrialism. However, the phrase 'cultural and creative industries' invokes two very difficult words—culture and creativity. We know full well that art and science—or culture and creativity—can be industrialised, once they exist. When a film is created, it can be distributed. When a powerful or seductive film is made, it can attract an audience, and with that audience, it can generate an economy. But the question of how a film that is interesting and attractive is created in the first instance is a much more troublesome matter. For such film making requires more than money and more than time. It requires imagination and thought. In short, it calls for 'creative imagination.' These are words that roll very quickly off our tongues, and easily become flippant clichés. But, as we point out in *Imagination*, while these are words that may be easily spoken, they are words that are very difficult to practice. The reality is that the number of genuinely creative artefacts or processes or works is very small. To bring them into the world is arduous. Very few people can do it. Likewise, the number of places or institutions capable of doing so is a tiny handful. To create a creative economy is not a matter of policy. It is not a matter of resources. It is not even a matter of knowledge. For sure, policies, resources, and knowl-

edge help at the margins. But are they the decisive factors? No, they are not.

Which factors matter is what we turn our attention to in this book. Broadly speaking, we single out three aspects: (a) the capacity of a society to manage deep cultural ambidexterity even to the point of systemic paradox, (b) the ability of a society to avoid scientific or cultural path dependence, and thus be able to make the kinds of genuine intellectual leaps that create knowledge rather than just transmit, reproduce, or distribute it, and finally (c) the capability of a society to create ways, styles, and kinds of thinking. The latter might be described as the aesthetics of thought. Styles of thought emerge in time, and disappear. But in doing so, they allow societies—for a period—to manage their ambivalences in interesting ways, and to gather sufficient intellectual power to create formidable art and science. The difficult thing is to bring these into existence, rather than to simply parcel out what already exists. Collective creativity is what permits a society to be intellectually productive. Societies that lack the factors of ambidexterity, gymnastic capacity and the aesthetics of thought lack imagination. They are not creative, or they confuse creativity with the accumulation, reproduction, and distribution of what is already in hand. This is what we think many contemporary 'creative societies' are doing. On close inspection, they are a lot less creative than many of their historical forbears, and it is this that makes us wonder whether much of the contemporary talk about 'world class universities' and 'knowledge economies' might not in the end be bravado in the face of a shrinking real capacity to animate institutions of knowledge with the kind of awe-inspiring art and science that is the expression of genuine intellectual power. One is left with the impression that today—despite some impressive achievements—we are surrounded by too many hollow institutions filled with too many hollow men and women doing too many meaningless things.

—PETER MURPHY, MELBOURNE, DECEMBER 2009

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Simon Marginson also has thanks. Michael Peters negotiated this group of three volumes that have been beautifully published by Peter Lang (*Creativity* 2009, *Global Creation* 2010, and *Imagination* 2010). Michael's range, penetration, inclusiveness and productivity are inspiring. Collaboration with Peter Murphy has been immensely fecund and opened the way to writing on a range of topics—including planetary history and evolution, the ancient Rome and Maya, Japan, the pre-history of human cultures, problems of modernity, and music—connecting these to older preoccupations in political and social theory, political economy, universities, knowledge and policy. To list all those who have helped in imagining the global would be impossible. Much is owed to the scholars cited in the chapters, including David Held, Arjun Appadurai and Manuel Castells who helped in shaping early understandings of globalization. Work on the books has been assisted by stimulating and happy discussions with Fazal Rizvi (especially), Rajani Naidoo, Glyn Davis, Richard James, Mark Considine, Marijk van der Wende, Aki Yonezawa, Hugo Horta, Roger King, Brian Pusser, Imanol Ordorika, Ken Kempner, Allan Luke, Phan Le Ha, Dang Kim Anh, Jane Kenway, Johanna Fahey, Chris Ziguras and Ravinder Sidhu. Simultaneous collaborations on international education with Chris Nyland, Erlenawati Sawir, Helen Forbes-Mewett, Gaby Ramia, Jenny Lee and Sophie Arkoudis suggested ideas about global agency. Thanks to Kazuhiro Kudo who kindly read and corrected Chapter 6 on Japan. Special thanks to three education managers who make it possible to be a scholar: Vice-Chancellor Glyn Davis, Dean Field Rickards and Director of the Centre for the Study of Higher Education Richard James. Sincere thanks also to Director Shinichi Yamamoto, Futao Huang and Jun Oba at the Research Institute for Higher Education at Hiroshima University in Japan where the readings for the *Imagination* chapters were completed in July-October 2009.

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Introduction

PETER MURPHY

Prologue

Imagination is the third volume in a series. It follows *Creativity and the Global Knowledge Economy* (2009) and *Global Creation* (2010).[1] The previous volumes explore the social and intellectual impact of the global knowledge economy, and some of the central socio-economic and spatio-temporal aspects of digital capitalism. In this, the third volume of the work, we turn our attention to the imaginary dimension of cybernetic capitalism. It is this, the symbolic aspect, which lends contemporary society its immaterial aura. In that, it is not unique. All material systems have their immaterial aspects. All social orders have symbols and representations. Images and the manufacture of imagery are rampant in contemporary life. But if this is the case, it is only because human beings are conspicuously drawn to symbolic and imaginary things.

Among the most important things that human beings create for themselves are symbols. They love something that represents something else. In a way, this is what meaning is, and all artifacts that social systems create, even the most material of things, and sometimes most especially the most material of things, have a symbolic dimension. The attraction to symbols is deeply embedded in the nature of humankind at the core of its species-being. Consequently, all societies produce symbols, and all societies have an imaginative dimension. In this volume, we ask what is the nature of this imaginative dimension, and how does it manifest itself in the digital age? All knowledge has an imaginative aspect. In our time, in the age of the knowledge economy, in an era that will pass as all previous eras have passed into the oblivion of time, we ask whether the power of the imagination plays a particularly pronounced role in social life? Has

the production of symbols now, today, become an observable animating economic force in contemporary society? Do we live in a world of Imagineering? If so—are contemporary societies then more creative than their forbears? Or are they just better at distributing the symbols and signs and other kinds of imaginative artifacts? Is the Internet first and foremost a medium of distribution or a means of production? And what do the answers to these questions tell us about the nature and dynamics of imaginative creation? Where, as the young child reasonably asks, does it come from, why does it exist, and what does it do?

(Looking) Around Corners

The imagination allows us to look around corners. The advantage of this to the human species has been remarkable. For our distant ancestors, to be able to anticipate the sudden turn of prey was close to miraculous. It provided an edge in the tough struggle to survive. And survive, it did—for ours is a species that not only sees what there is to see but it sees itself in the mirror in reverse, and in its mind's eye it sees in converse. It also sees what is not there at all, and it sees affinities and connections between things that are completely unexpected. But a note of caution: the idea that the imagination 'sees' is a metaphor. Every characteristic that we attribute to the imagination, just like every connection between things that the imagination 'sees' or 'draws,' is a metaphor—just as the attributes of all things are metaphorical, even if most of them are long dead metaphors. No need to belabor the point much more—but a 'dead' metaphor is itself a metaphor, as is the 'laboring' of an argument and the 'point' of a contention. There is no escaping the infinite circle of metaphor. Correspondingly, we can invoke any of the senses, and much else besides, to describe the imagination. Our imagination can hear and touch, as well as see. Someone somewhere long past cast the imagination in olfactory terms. There are perfumed ideas and acts of artistic direction that have the stench of decay about them. But, equally, we 'paint' the imagination in both cognitive and emotional 'colors' as well. There are hot and cold imaginations, just as there are cutting and probing imaginations. The imagination is a mix of feeling, sensing and thinking. From each of these sources, a torrent of descriptors pours forth.

So whenever we talk about the imagination, we can only ever talk about it in imaginative terms, even if we habitually have to resort to the dried-up imagination of cliché. We cannot escape the circle of imagination. That circle, and what it condemns us to, is the human condition. We are the imaginative species that lives metaphorically. This is a strange condition. What it means is that human beings 'act' in pursuit of meaning, rather than 'react' out of

instinct as other species do. The imagination is the obverse of animal instinct. Where the imagination is reflexive, instinct is a reflex. Instinct is a response to internal and external stimuli. It is true that some basic human feelings (such as affects like anger and fear) are reactive. They are, in some sense, a residue of the instincts. But human beings are not only reactive in their behavior. In the course of their natural history, and its eventual peculiar interweaving with social history, human beings developed cognitive feelings.[2] These feelings regulate human interventions into the world. They animate the human ability to create a second nature. This second nature, humankind's own constructed environment, does not replace first nature but rather exists sometimes happily and sometimes not so happily in tandem with it. Cognitive feelings draw human beings into shaping and directing, constructing and reconstructing, and on occasions destroying the world around them. Cognitive feelings are bound up with choosing, deliberating, deciding, calculating, risk-taking, and so on.[3] Such feelings have a sizable imaginative component.

Cognition requires in each of us the capacity to run scenarios, to think about alternatives, to model situations based on assumptions, and then to change the assumptions. To think 'what if?' and to plan 'if, then' requires imagination. So also does the human capacity to make friends and fall in love. Beyond the level of simple affects, human attraction relies on imagination. We never think of others as they are, nor do they think of us as we are. For who we are, is always who we are not.[4] Human beings have public and private sides, open and secret lives. They commit and betray, and love and hate, in the same breath. They are actors, they wear masks, and they perform roles. They are themselves and yet at the same time someone else also. Because of this, they surprise and excite us—and keep us interested and on our toes.

Humankind has an altogether unusual capacity for imaginative transport. It imagines itself in places before it goes there. Sometimes, some individuals even prefer to travel in their imagination rather than actually go places. The imagination often is more interesting than everyday reality. Even staying home, some human beings roam far and wide. Without the imagination, the ascent of the species out of Africa, and its vast journey across the face of the globe and beyond, would have been impossible. It is not that human beings have managed to occupy several ecological niches successfully. Rather they created their own artificial ecology, a built world.[5] They invented their own second nature. This second nature inevitably has complicated and tensile relations with the first nature that human beings are eternally part of. Human beings have occupied lands and seas, coasts and interiors, shores, mountains, plains, estuaries, and forests. They belong everywhere and nowhere. They inhabit an uncanny zone located in-between nature and society, biology and history. They

are a peculiarly double-coded species. The human condition of being in between nature and society is perhaps, speculatively, a reason for the imagination. The imagination is an outgrowth of this bifurcated condition, and at that same time it underscores it. The imagination is the human faculty that copes best with the double-coding of human existence. In a way, it relishes the double nature of human existence. Conversely, the imagination turns everything that it sees, hears, and touches into something else.

For human beings, everything is 'as if' it was something else.[6] As Michael Peters observes in chapter seven ('Thinking'), Wittgenstein famously imagined language as a 'game.' Nobody conceived of language in such terms until Wittgenstein drew the connection. In drawing the connection, he engaged—profoundly—in an act of thinking. He 'showed' (as he liked to put it) how one important thing (a game) was like another important thing (language). This happens in all human discoveries and inventions, and in all generation of new meanings. They 'show' how one artifact 'is like' another artifact—how one thing 'is' something else. Take for instance the case of the ancient Greek temple. In certain key design aspects, the temple was 'as if' it was a wooden hut, and the hut in turn took its cue from the sheltering canopy of trees. Since antiquity, endless building types, from houses to banks, have been inspired by the Greek temple form. Everything that we encounter is 'like' something else. Human beings see everything around them as a metaphor. Mostly these are dead metaphors, itself a metaphor. So, mostly, the imagination leaves only a very slight trace upon the world. Yet there also comes moments when the imagination has powerful effects. It transports us. Before cars, boats, and even our humble legs, comes the imagination. It is the single most effective means of transportation that we have. Metaphor, in ancient Greek, is a word for transport.[7] Everything that we hear, see, taste, and touch, all of our cognitive processes, our choices, evaluations, and decisions, are subject to our imagination at some point, even if only peripherally. Our reason also, as Peters remarks on in chapter seven, has a history because of this. Different metaphors—different styles—frame our thinking. Different eras, different epochs, have a penchant for different metaphors for thought. These styles of thinking pass into and out of use.

The species whose mind has the remarkable power to transpose and transport everything it encounters into something else simultaneously has the equal and opposite capacity to transpose and transport itself around the world, and beyond. This is an adventurous, exploring species. It cannot help itself because it is so constituted. If it cannot explore outer space, then it turns to the nano-level of creation. If it cannot go abroad, it explores the landscape of its inner psychological world. Soon it finds that its inner explorations are

conjoined with its outer explorations, and one form of exploration becomes the metaphor for another kind.

The metaphorical power of 'as if,' the power to imagine one thing as another, makes the human world a virtual one. Our own contemporaries are very aware of the virtual aspect of the imagination because of the spread of digital technologies. The impact of these is assayed by Michael Peters. The book is transformed into the electronic reader, community migrates online with LiveJournal and Facebook, currency notes turn into electronic credit transactions, and physical mail is replaced by electronic mail. Images become words, and words become images. Games look like movies, and films mimic games. Prolific acts of 'as if' re-mediate the media of the world. This is an effect of our species' unusual capacity for metaphorical translation. Such translation allows us to turn what is different into what is similar, and yet retain dramatic contrasts in the very midst of those fertile likenesses. The transmogrifying of the horse-drawn carriage into the automotive car is typical of the inventive consequences of the analogical mind-set of human beings. As Simon Marginson observes in chapter six, Japan translated Chinese premodernity and Western modernity into a successful and idiosyncratic civilization. In borrowing, it created anew.

It was once popular to conflate the imagination with dreams. Twentieth-century philosophical painters like René Magritte and Salvador Dali depicted unusual juxtapositions and revealed the hidden affinities of things in dream-like or surreal landscapes. This had a partial validity. A part of the imagination does work in sleep. Anyone who has had to solve a problem can testify to the power of sleeping on it. Yet the imagination is not simply reducible to dreaming. More particularly, it ought not to be confused with fantasy. For the imagination is deeply rooted in reality, even if it utilizes dreaming and other kinds of free association as a way of experimentally making unusual conjunctions of things. It is notable that highly imaginative people are also often very practical and grounded. Shakespeare, who epitomizes the poetic imagination, was an exceptionally capable businessman. Because the imagination is practical, and is grounded in reality, it has profound social consequences. If we look at modern economies, as we do in this volume, we find that the most successful ones, measured by the normal indicators, are also highly inventive. Gross domestic product and per capita registration of patents and copyright are strongly correlated. Invention is powered by the analogical imagination. Things 'come to be'—that is to say, they 'come into being'—through metaphor and its material applications.

We may speculate about a root metaphor of all things, but a root itself is a metaphor, as is the well-spring, the origin, and the source of creation, as

indeed is the very notion of creation itself. This does not mean that the explanation and the interpretation of things are fruitless or regressive, or that meaning is ultimately meaningless. Rather what the phenomenon of imaginative transportation implies is that meaning is paradoxical. Namely, everything meaningful turns into its opposite. Creation, as Peter Murphy describes it, is a paradox. It is out of such paradoxes—which are seemingly semantic impossibilities—that new meanings arise. Metaphors turn the impossible into the possible, and thereby new meanings emerge. Meanings created in this fashion are not only linguistic in nature. Social meaning is produced in a similar way.

The production of new social meaning is akin to what Michael Peters describes in chapter nine. The bureaucratic industrial system of the twentieth century was remarkably successful for many decades. It generated the institution of the business firm and flagship companies like General Motors. Then it fell into systemic decline. The result is that once mighty companies became supplicants before governments. When events of this kind happen in a social system, crises of meaning are generated. Crises, if they are resolved, are followed by a renewal of meaning. The renewal of meaning is achieved through creative media such as those of metaphor. In 'Practice,' the final chapter of *Imagination*, Peters reviews a concrete, micro-logical example of such a stirring of renewal. He describes the phenomenon of 'mass customization'—the development of models of service delivery that combine personalized characteristics with standard characteristics, and in doing so bridge in a paradoxical manner between industrial and non-industrial, mass and custom, personal and standardized models of production and delivery. In a semantic sense, this is how meaning is created.

The production of meaning, as much as the production of goods and services, has a social dimension. Not only does it have a social dimension, but different societies are better and worse at producing meaning. This is because societies are more and less imaginative. At different times, and in different places, societies display greater and lesser powers of imagination. When societies open the flood-gates of the imagination, it is for short periods of time. In the present volume, we observe at close quarters the way in which the species-capacity to imagine becomes a social and historical force. Imagination is not just an individual and psychological capacity, though it is that. It is not just a faculty that belongs to us as a species, though it is that as well. Imagination is also a collective, social, economic and historical capacity. The creators of the modern firm helped sweep away centuries of feudal behavior. But they did so analogically by reinventing the idea of hierarchy, translating the idea of the highly personalized status hierarchy of the feudal era into the de-personalized procedural status hierarchies that we are familiar with from the

organizational era of modern capitalism. Corporatism was replaced by the corporation. Hierarchy did not disappear in the modern age of equality. Rather it assumed some remarkable new expressions.

Three Models of the Imagination

The invention of the procedural hierarchy—the key form of modern organization—highlights the ironic field of tension that the three authors of Imagination deal with. Each one observes the twin imperatives of imagination and institutionalisation, and the paradox of imaginative powers that create institutions and the institutional forces thus created that then inhibit the imagination.

Model One: Collective Creation

The first model of the imagination that is presented here emphasizes the role in creation that is played by common cognitive forms (such as paradox and analogy) and by common aesthetic forms (such as proportion and symmetry). These are the pervasive media of creation—and are widely deployed in diverse acts of creation. Conversely they are the building blocks of the human imagination. But not in an inward-looking sense—for the media of creation are public and social in character. Indeed some of them are sewn into the very fabric of first nature.

Chapter one, 'Imagination,' discusses collective acts of creation. Many of these, such as the European Renaissance or the Age of the Knowledge Economy, are epochal in scale and impact. They all draw on a deep background of persistent aesthetic forms and enduring cognitive and metaphysical patterns that shape nature, society and human selves. Human beings draw endlessly on these forms and patterns. They constitute a creative commons available to all social actors who recast them in adaptive, inventive and innovative ways, and apply them to surprising ends. Developments in the sciences and the arts, innovations in economic and social institutions, and new types of political behavior and existential character owe much to the generative power of these forms. Yet these same forms and patterns, no matter their unorthodox applications, have an immutable or recurrent nature. The chapter reflects on the paradoxical relationship between change and continuity in creation—and speculates that in fact it is appositions and paradoxes of this kind that drive or constitute the very act of creation.

Chapter two, 'Creation,' expands the discussion of the collective or social nature of creativity. What is highlighted is the role of non-discursive phenomenon such as intuition, figure, and shape in the creative process—as

opposed to discourse, logic and argument. Creative media, it is suggested, are primarily pre-linguistic in nature. That is, the unsayable is the primary medium of creation. That is true even when we speak and write. This directs our attention to the way in which large-scale collective creation works. The architecture and design of cities shows us how the inarticulate 'design principle' of creation operates. Great cities are a kind of commons. They are works of indescribably complex yet intuitively graspable cooperation that is inspired and put in motion by splendid forms and ingenious patterns. From Athens and Rome to Renaissance Florence and Venice, Elizabethan London, nineteenth-century Paris, New York and Chicago from 1860 to 1960, mid-twentieth-century Tokyo, and, thinking about the future, Shanghai and Houston tomorrow—all these are cities in their golden age (or what might prove to be a golden age).[8] Most of the great examples of human invention have come from a handful of mercurial cities in very concentrated time periods.[9] No-one can really explain why this is. It is as though a collective rapture subsumes places for a time, and then, all of sudden, passes on, leaving them contemplating their own stolidly uninventive navels. Creation is fascinating and often inexplicable. So is the faltering of creation. The latter can happen catastrophically—as in the case of Detroit after 1960. It can also take a less visible form, say of drift, which is evident, as Simon Marginson discusses in chapter six, in Tokyo today. Surfaces may glitter for centuries, as in the case of Venice, but in the depths of the mercurial city the machinery of creation can unwind, generating in its wake fascinating tensions and social self-delusions.

Our own age—the age of the knowledge economy—widely advertises itself as imaginative. It loves metaphors of the imagination. At the close of the twentieth century, many advanced economies had become enraptured with the idea that they were creative economies run increasingly by creative classes of technologists, artists and the wielders of signs and symbols.[10] As in the case of all dominant social self-conceptions, there is more than an element of truth in that assertion. Yet it is also an exaggerated truth. Chapter three 'Discovery' looks at the contemporary inventive capacity in the arts and sciences, and asks whether it is greater or lesser than in comparable societies and periods in the past. The conclusion, here, is that we do exaggerate our own capacities. Contemporary creativity, measured in real terms, is less today than it was a hundred years ago, and is less impressive when compared with a number of major scientific and cultural periods from the Renaissance onwards. Whether we are talking about cultural and creative industries or about basic research in universities, the picture of the last twenty-five years has been one not of the growth of creative power in real terms but rather the relative decline of such power. It is not unusual in human history that decline is matched by assertions of the

opposite.

This does not mean that the digital age does not have its remarkable inventions. It does, just as the digital age in effect re-invented capitalism. That extraordinary calculating machine, the computer, has deeply transformed economic, social and intellectual behavior. It is difficult to find any area of human behavior that is not now in one way or another mediated by computing in one guise or another. Cybernetic, digital and knowledge capitalism is a significant social phenomenon with the distinctive features that Michael Peters delineates in the present volume and which we have discussed at length in *Creativity and the Global Knowledge Economy* and *Global Creation*. From open source property to distributed organizations, the managerial and technological inventiveness of the digital age is significant. But the question of the degree and depth of that invention, and how it will stand up in the long-term, remains nagging. The research universities, for example, have come to a moment of self-consciousness in recent times, as Simon Marginson observes. Yet, as he also suggests, the power of invention of those key cultural and scientific institutions may be today less in the arts and sciences in the traditional sense, and more in the field of management and strategy, as these great universities re-invent themselves as global institutions separated from their metropolitan origins and their twentieth-century national settings.

Model Two: Global Imagination

In Model Two the lens is the global imagination. The global dimension has a planetary materiality but global vision and relations are human practices. Chapters four to six by Simon Marginson are about imaginings of the world as a whole; about the imagined global dimension of action, and the map of actions and strategies emerging in universities in the wake of contemporary communicative globalization; and about what is happening to imagining and creativity in this contemporary global dimension. They also talk about the collision between the global imagination and more bounded fields of thought that is becoming increasingly apparent. These chapters continue the exploration of globalization, creativity and the field of higher education in Marginson's chapters in the second volume in this series, *Global Creation,* and extend the discussion of the university and creativity that is opened by Peter Murphy's chapter three in this volume.

Chapter four, 'World,' opens with a history of the global imagination. It begins with Earth, the eco-sphere itself, and the emergence of the vision/mobility coupling in animal species. More than 540 million years ago at the opening of the Cambrian period the ubiquitous trilobites, the dominant species of their day, were the first to achieve vision, enabling them to instant-

ly apprehend the environment around them as a single relational space. The decisive achievement of vision generated a tremendous wave of species innovation and ecological transformation, the Cambrian radiation. Vision and mobility together enabled successive animal species, including human societies when they emerged, to move closer towards the reflexive apprehension of the interdependent world as a zone of action. The ancient Greeks knew that the world was round, and science in India and Persia was able to measure its circumference in abstract, but it was not until the sixteenth-century European world empires' astronomy and navigation that the notion of the world as a sphere became lodged in popular awareness. Even then the round world was not visible to the eye. In the twentieth century air travel and the visual apprehension of the curved Earth brought a sense of the global closer. Then came the leap into space. The decisive breakthrough into the global imagination was the vision of the Earth floating against the blackness of space transmitted back to earth by the astronauts and cosmonauts in the 1960s and 1970s. At that point the form of the iconic sphere and the notion of the 'global' moved to a central place in the human mentality. The ecological movement, the cheapening of air transport, the Internet and the roll out of global communications followed, bringing into practical form a global dimension already lodged in the imagination as the common home of humanity.

Chapter four draws together the dynamics of global space in the age of the knowledge economy, including the de-severing of distance, the flourishing of synchronous relations across borders, place and identity, positioning strategies and global flows of knowledge. With the emergence of the global dimension to a central role in human imagining, relations and action, global sub-systems have developed rapidly. The focus of chapter five, 'University,' is the global space of higher education and research and the imaginings that are building it. In the universities a novel global architecture is being made and the pace of change is remarkable. After discussing the university forms and strategies of the last two decades, the period of communicative globalization, the chapter moves to data gathered in a set of interviews with university leaders from twelve countries. The university presidents expound their visions and fears; their acts of enterprise, daring and timid by turns; the productions of the 'World Class Universities' over which they preside; and the openings, hierarchies, inequalities and closures they see. At a time when the university form has become truly ubiquitous, university strategy-making has become a key site of creation. The landscape of the global knowledge economy is dotted with the pyramids erected by latter-day pharaohs: the networks and consortia, the would-be education hubs and offshore campuses, and the citation engines, the concentrations of science power. University rankings and other comparative

performance indicators monitor executive action. Every president wants to preside over the next Harvard. Yet it seems that building global presence and status in the k-economy is not the same as hosting major intellectual achievement. The capacity of the modern university-city to generate really great works in the arts and sciences is in question (chapter three). Does this means the locus of creativity in universities has shifted from scholars and researchers to university executives? Are the methods of research management used to lodge the university form in national political economies, at the same time as universities are colonizing the new global spaces, somehow inimical to those leaps of thought in which heterogeneous or opposing qualities are cast into creative relations, and questions of the utilities of research remain open rather than inherent in pre-managed research design? Is the simulated 'research economy' and its performance indicators crowding out stellar creativity and diminishing rather than enhancing the potential for intellectual breakthroughs? The chapter draws on evolutionary theory to discuss patterns of innovation in the knowledge economy, and organizational sociology to investigate the standardization of university forms in this period. It reviews archaeological findings in the hundreds of ancient Mayan city sites in Mesoamerica, contrasting the Mayan patterns of commonality and diversity with those apparent in the global university sector today. A key element in the emerging global university space is the tension between national and global ways of seeing. The modern university is the product of the high time of the nation-state of the last two hundred years. It continues to be nationally regulated and funded. Yet its global imaginings and actions push beyond national borders and the pre-global notions of international competition, internationalism and multilateralism whereby states define and limit the world.

Chapter six, 'Nation,' expands on the discussion about globalization and the national imagination. It crosses the Eurasian landmass in time and space from the western to the eastern extreme, passing from Ancient Rome to emerging Japan and then Japanese universities today. The core inquiry is into different ways that bounded national identity and wider engagement are combined, the costs and profits in those strategies—and also what happens when national and global imaginings conflict. Rome enfolded its prolonged engagement with Greek culture and the reciprocity between 'romanization' and 'hellenization,' and its tolerance of local languages and agency, into the process of identity formation. The climax of this feat of multiplicity was the remarkable pre-industrial modernization of the emerging empire of Augustus. At the heart of the revolution was a renovated Roman tradition, which, in a sharp break with the exclusive forms that sustained the republic, could be progressively extended so as to encompass all of the free inhabitants of the empire. The

successive and contrasting modernizations of Japan that followed from the Tokugawa Shogunate at the beginning of the seventeenth century, and the Meiji 'restoration' of the power of the emperor in 1868, likewise drew much of their authority from a malleable and potent national tradition that was remade in the process of modernization. But in other respects Japan's solution could not have been more different. Instead of a porous and extendible boundary a firm wall was created. Despite the derived nature of many of Japan's icons such as Buddhism and script and the emperor system, *Nihonjinron*, the world of constructed 'Japaneseness,' was closed to outsiders. Challenged by foreign technology, language and culture in the nineteenth century, the method was not to embrace multiplicity on national terms as in Rome, but to do as Japan had always done, to produce a sanitized hybridity, in which foreign motifs were 'translated' into Japanese ones and then absorbed safely into the national sphere.

Led by a top-down nation state which retains a close hold on many aspects of social and cultural life, the Meiji approach to the world continues. The resilience of a distinctive and also bounded Japanese zone of imagining is notable. The price is that within the protected shell only some kinds of innovation are possible; in a more global era in which loose networking and multiple identities maximize strategic flexibility, the two-step character of engagement emerges as a handicap, and unlike its neighbour China, Japan seems unable to shape the emerging global order. This might explain the apparent paradox of universities in Japan. Global research universities favor common language and the loose coupling of plural selves, and like creative cities they draw much of their edginess from the strangers in their midst. Despite the brilliance of Japanese systems and products in many spheres, and the often stellar character of Japanese science, university strategies are under-developed, academic cultures seem to be closed and conservative, and there is vexed confusion about 'internationalization.' The case of Japan also illuminates in stark relief the national-global tensions that are an endemic feature of the global knowledge economy. Those tensions especially show themselves in sites such as higher education where global imaginings are part of the core business of research universities, but many of the conditions of possibility of higher education, including funding and regulation, continue to be shaped by nation-states. Nations and national cultures will not disappear in a more global era, whether associated with nation-states or not, and in all kinds of practical ways University and Nation are necessary to each other. But it is a case of 'same bed, different dreams,' because nation-states often have other imaginings to those of 'their' universities. Paradoxically, universities are only really valuable to the nation-state when they are 'disloyal' to it—when they place global relationships and systems, such as the formation and sharing of knowledge, and the free

cross-border border movement of people, above the interests of the nation-state. Universities engaged in the global dimension are able to open up opportunities for the nation to learn from global sources, and also to take the nation's agenda into the world. National cultures that are unable to become proactive within the global conversation are likely to lose ground in the longer term.

Model Three: Re-imagining Education

Part of this global conversation is about the kinds of institutionalisation relied on by contemporary societies. Almost four decades ago Ivan Illich in *Deschooling Society* (1973) drew attention to the impossibility and contradictory nature of education through schooling within modern economies in the West.[11] The institutionalization of education leads to, and is a paradigm example of, the institutionalization of society—one might also say the 'institutionalization of the imagination.' Illich provided a trenchant critique of educational modernization: in the style of a present-day Rousseau, he explained the corrupting and psychological destabilizing effects of institutions on the individual that robs people of their initiative and imagination, standardizing personalities and encouraging an unhealthy dependence on the school that as an institution confuses process and substance, teaching with learning, grade advancement with education, and competency with imagination. Like Carl Rogers before him, Illich pointed to the fact that there is no necessary relation between teaching and learning, that freedom is necessary for people to flourish, and that, indeed, the position of teacher or administrator is no more than an authority that actually prevents learning. (Illich talks of the 'disabling professions' in a critique of 'expert culture.')[12]

The process of schooling for Illich is an example of mass institutionalization that produces conformity, undermines confidence, breeds 'psychological impotence' and kills conviviality as the source of imagination and new ideas. Illich's deschooling critique is also fundamentally a critique of the commodification and standardization of education related to the production and marketing of knowledge, where learning itself inevitably becomes a commodity. Illich's deschooling thesis is a generalized critique of institutions and the processes of institutionalization—a thesis that predates Foucault's 'power/knowledge' and his studies of the effects of the clinic, the school, the prison and the factory. The deinstitutionalization thesis gelled with the anti-psychiatry movement of the 1970s and the attempts to reform the large centralized mental, prison and hospital institutions that existed at that time. Illich's critique must be seen ultimately as a critique of modernity and, perhaps, his central question is how do we create convivial rather than manipulative institutions that encourage 'creative intercourse' among persons where

modern technologies serve 'politically interrelated individuals rather than managers' enabling the choice of a life of action over a life of passive consumption.[13] In education he advocates 'learning webs' as convivial institutions where skill exchanges and peer-matchings could take place and references to educational objects, processes, and education-at-large may occur within a decentralized, facilitative network.

Illich's critique and his advocacy of convivial institutions and in particular 'learning webs' made well before the advent of the Internet in 1992, and the new P2P networks and self-regulated learning platforms that developed progressively since the 1990s, was entirely prophetic. In one sense we can see Illich's essay on deschooling as a plea for the freedom of the imagination and of a set of decentralized and convivial solutions to the encouragement of imagination and action as the raw materials for a lifelong 'learning society.' It is in this context that 'personalization' as a policy discourse and practice emerges—as a generalized solution to the problem of the overburdened, 'big' centralized state and as the prospect of more open and molecular government both at the national and institutional levels. In chapter nine, 'Practice,' Michael Peters argues that personalization makes use of new open technologies and forms of social media (the technological imperative) to devise architectures of citizen participation and collaboration in 'prosumer' open governance systems with an emphasis on co-production of public goods tied to democratic action (the social democratic imperative) that harnesses high levels of individual motivation through use of social networking and utilizes rational choice making with the aim of promoting personal identity and autonomy (the psychological imperative). He then interprets these imperatives as the basis for the new personalization learning revolution on the horizon and reviews recent policy initiatives in the United Kingdom in this light.

In chapter seven, 'Thinking,' Peters develops a parallel or 'sympathetic' argument that centrally addresses 'thinking' and the cognitive rationalist paradigm that has dominated philosophy-as-epistemology,[14] and the Western tradition in education since the time of Plato. He argues that the contemporary tendency in education to treat thinking in isolation from imagination is reinforced by cognitive science that approaches thinking a-historically and a-culturally, as though physiology, brain structure and human evolution are all there is to say about thinking that is worthwhile or educationally significant. The movement of critical thinking also tends to treat thinking a-historically, focusing on universal processes of logic and reasoning. Against this trend and against the scientific spirit of the age, this chapter presents a historical and philosophical picture of thinking motivated by a Wittgensteinian interpretation—where 'thinking' is defined by the ability to make imaginative 'moves' in the 'language game.'[15] By contrast with dominant cognitive and logical

models, the chapter emphasizes 'kinds of thinking' and 'styles of reasoning.' It grows out of interests primarily in the work of Nietzsche, Heidegger and Wittgenstein, and in the extension and development of their work in Critical Theory and French poststructuralist philosophy, and draws directly on some of this work to argue for the recognition of different kinds of thinking (explored with reference to Heidegger) and also for the significance of styles of reasoning (explored with reference to Wittgenstein and to Ian Hacking).

In chapter eight, 'Image,' Peters examines the new environment of social media—based on the radical concordance of image, text and sound, and the development of new information and knowledge infrastructures—in order to ask: What new subjectivities are constituted through social media and what role does image control play in this process? What new possibilities do the new media afford students for educational autonomy? What distinctive forms of immaterial labor and affect do social and image-based media create? And what is the transformational potential of new image-based and social media that link education to its radical historical mission?

Imagination's Model One concerns collective creation—'collective intelligence,' 'wisdom of the crowd,' the co-created production of symbolic goods and the 'collective unconscious,' often driven by the storehouse of accumulated pattern-forms. Model Two details the global imagination based on the 'open' university within processes of globalization. Model Three, motivated by readings of Wittgenstein and Foucault, modulates themes of both 'openness' and 'control' to provide both a picture and a story of education that is based on the liberation of the imagination from standardized processes of mass educational production and the transition toward new, networked, self-regulated, autonomous environments of co-creation as a means of promoting a new personalized 'education of the imagination.' This is a model of application that brings together both technological and moral orders in order to analyze the new conditions of the manufacture of imagination and to question the continuing ocularcentralism of the twenty-first century and the persistent hegemony for example of the screen image that drowns us in an overflow and repetition of visual images. With any shift of paradigm or model, there are new dangers: with the increasing dominance of visual images over text, we need to ask whether visual culture can deliver on its promises of a pedagogy that exposes the deep bias of screen images and their inherently ambiguous nature?

The Critique of the Bureaucratic State

As Michael Peters narrates in chapter eight, the twentieth century opened with the rise of the cinematic imagination. It closed with the rise of the digital imag-

ination. The former mode of imagination is primarily visual; the latter is as much tactile-kinetic as it is visual.[16] One produced industrially, the other in cybernetic mode. Between the beginning and the end of the twentieth century, the cinematic imaginary underwent a series of transitions culminating in a kind of oblivion. In the course of this, the epistemological function of the image shifted dramatically. The cinematic image moved from being a reflection of reality to a mask of reality to masking reality to bearing no relation to reality. The sad end-point of Hollywood as an infantile sand pit of reality shows and celebrity disconnection from life is a perfect illustration of the terminal state of this historical process. Intellectually, when the image became simply an image of another image, the cinematic age had arrived at the post-modern dead-end. At that point, it had lost its metaphoric and consequently its artistic power. There is no doubt that, socially, the visual image triumphed. But in the end, with society awash with such images, it was a triumph of vacuity. From the moral summit of Michael Curtiz's *Casablanca* (1942), we have spiraled down to the clever inconsequence of Quentin Tarantino's *Inglourious Basterds* (2009). No set of encyclopedic allusions can take away the ultimate emptiness of the image that is the image of another image.

Cinema was the great art form of the twentieth century. It is not so in the twenty-first century—far from it, as Murphy notes in chapter three. The audience for cinema has declined, and so has cinema's artistic quality. The number of great films as a percentage of the total film production has shrunk dramatically and probably irreversibly. It is interesting to observe what has paralleled this development. As the visual-cinematic imagination has lost traction culturally, so, almost in lock-step, has the industrial mode of production and social confidence in bureaucratic forms of hierarchy. It is uncertain what will prove to be the great art form of the twenty-first century. It will not be cinema. Its day has past. We are coming to understand that—just as we already know that computer-mediated production is now more significant than mechanical-driven production.

The third key social dimension—after that of representation and production—is organization. In the modern age, bureaucratic hierarchy replaced feudal hierarchy. Michael Peters, in the final chapter of *Imagination*, traces the growth of the critique of bureaucracy through the second half of the twentieth century. In the years when the procedural ethos was at its peak of self-confidence, its first critics were developing cutting critiques of its nature. The criticisms have proliferated with time. Peters' narration of this culminates in a detailed discussion of one contemporary social democratic version of this current, coming out of the United Kingdom. He also notes though that the critique of bureaucracy has been prevalent across the political spectrum from left to right. There have been many versions of it. Iterations have ranged from de-

institutionalization theories to proposals to replace the state with the market to the creation of bureaucratic pseudo-markets. Some of these critiques forensically distinguish desirable public goods from the undesirable bureaucratic state. Others do not. How it is possible to deliver public goods without the wasteful absorption of time, energy, resources and judgment in witless bureaucratic labyrinths remains far from certain, though ingenuous definitions like mass customization continue to percolate to the surface.

The incidence of the critique of bureaucracy on the left and the right of politics is notable. For example, on the left of centre, the philosopher Cornelius Castoriadis (1991, 1997a, 1997b, 2007), whose work is discussed in chapter one, was a trenchant critic of bureaucratic capitalism. He proposed various ideas of self-organization and social autonomy in opposition to it.[17] Yet we find, on the right of centre, distinguished market liberals like Friedrich Hayek (1960) and Milton Friedman (2002), and major conservative intellectuals like Roger Scruton (2000), have all written eloquently against bureaucracy.[18] It is equally notable that, despite all of this, bureaucracy flourishes. It appears unstoppable. It might be that citizens, customers, and clients are ill-served by bureaucracies. Yet the modern state acts through bureaucracy. It is the principal medium of the state. It is also the principal medium of large companies and of large non-profit and non-governmental organizations and foundations. Therefore to act to solve a problem means, today, primarily, to create a policy and a set of paperwork and bureaucratic criteria for implementation, which is why, as Simon Marginson notes ironically, some of the most creative work of universities comes out of managerial and strategic action that creates new positions, new policies and new paperwork. Contemporary research universities worldwide are in process of globalizing their operations. National measures of research performance and national systems of research management are being in part displaced by global indexes of performance and comparison. Yet the bureaucratic structures of twentieth-century mass society and its cumbersome multiversity struggle to cope with these imperatives. Most national governments still run national research management schemes that do not align with international measures of performance. Most measures of creativity build in procedural assumptions that define many of the chief salient characteristics of creativity out of the measures of creativity.

We can happily live with irony. Still these ironies have a downside—for, as Peter Murphy observes in chapter three, the universities are less creative today than they were a hundred years ago. Overall the empirically measurable level of creativity in leading societies is less today than it was a century ago. The emphasis on bureaucratic management, and in a more general sense on procedure and procedural ideologies, is part of the reason for this. Yet despite this being so, and in spite of the critique of bureaucracy and the attempts to

define public goods without a procedural incubus, bureaucracy continues to grows, and it has very determined defenders. Equally, there is no agreement between left of centre and right of centre critics of the administered society. Indeed, there is generally unmitigated loathing between the two. Procedure remains the default way of dealing with social issues. In a procedural world, no one is personally responsible for its failings. It is always 'the system,' so fix the system, which means in the end more system and more paperwork. In the paperless society, paperwork flourishes. Part of the problem is that there are also many unpalatable alternatives to the administered society. Neo-patrimonies, feckless patronage systems, collegial fawning, neo-feudal feather-bedding, and indulgent license are just a few that come immediately to mind.

So we begin the twenty-first century with a conundrum. We know we inhabit Max Weber's iron cage.[19] We want out of it. But we can't figure how to. We would like to think that human inventiveness will enable us to find a way out. Yet we are also aware that invention is paradoxical. We reach out for what is hot only to find that its heat is generated by the freezing cold. The composer John Cage made the point that silence is noisy, and that noise is ultimately indistinguishable from music.[20] Another composer, Roger Waters, the deviser of Pink Floyd's *The Wall* (1979), was a socialist who made brilliant dystopian musical theatre out of post-war state socialism's sour experiments in education. Within the space of such strange contradictions, we all live, happily or unhappily.

Notes

1. Peters, Marginson, and Murphy (2009); Marginson, Murphy, and Peters (2010).
2. Heller (1979).
3. Murphy, 'Living in a Kitsch World' (2009); 'From Information to Imagination' (forthcoming).
4. Murphy, 'I am not what I am' (2010).
5. Murphy and Roberts (2004).
6. On Adam Smith's penchant for the analogical 'as it were,' see Ford (2010).
7. The Greek *metaphero* (to 'transfer') from *meta* ('between') and *phero* ('to bear' or 'to carry').
8. On the interesting counter-intuitive (but for that reason very interesting) case of Houston as a global city of the future, see Joel Kotkin (2009).
9. A classic account of this is Lewis Mumford (1961).
10. Classic accounts of this include Florida (2003) and Howkins (2001).
11. Ivan Illich (1973).
12. Ivan Illich (1977).
13. Ivan Illich (1975).
14. As a counterpoint, Michael Peters points to Richard Rorty who addresses these issues in his *Philosophy and the Mirror of Nature* (1980) where he suggests that phi-

losophy must become 'therapeutic rather than constructive, edifying rather than systematic' and adopts a conversational model based on Gadamer's philosophical hermeneutics as a means both to release us from the cognitive paradigm of philosophy-as-epistemology and its foundational, analytical and representational impediments that have held us captive. Rorty—as the leading American neopragmatist who bases himself on Dewey—is one of a group of thinkers along with Nietzsche, Wittgenstein, Peirce, Heidegger, Derrida, and Deleuze who make room for imagination in philosophy by inventing new concepts, new vocabularies, new strategies in the 'language game' and edge us toward a new game or, perhaps, a new openness in the game. In 'Pragmatism and Romanticism,' he restates Shelley's argument in 'Defense of Poetry' claiming that at the heart of Romanticism was the idea that reason can only follow paths that the imagination has first broken: 'No words, no reasoning. No imagination, no new words. No such words, no moral or intellectual progress' (see Rorty, 2007). A more sceptical reading of Rorty is given by Peter Murphy in chapter two.

15. In this regard, see Peters and Marshall (1999) and Peters, Burbules and Smeyers (2010).
16. Murphy (2009).
17. The work of Castoriadis' long-time associate, Claude Lefort, was also notable for its sustained critique of bureaucracy. See for example Lefort (1986).
18. In the francophone world, see also the strong current of neo-DeTocquevillean liberal-conservatives such as Raymond Aron (1968), Jean-François Revel (1977) and Pierre Manent (1998).
19. On Weber's metaphor of modernity as a cage, see Murphy and Roberts (2004).
20. Cage typifies the mystical approach to the human imagination. On this, see Fuente (2010).

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