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Abstract
This article revises Foucault's account of biopolitics in the light of the impact of the molecular and digital revolutions on 'the politics of life itself'. The confluence of the molecular and digital revolutions informationalizes life, providing an account of what it is to be a living thing in terms of complex adaptive and continuously emergent, informationally constituted, systems. Also revisiting Foucault's *The Order of Things* and its interrogation of the modern analytics of finitude, the article argues that our contemporary politics of life is therefore distinguished by the quasi-transcendentals that now distinguish informationalized life: circulation, connectivity and complexity. Here, too, the article argues, the figure of Man, which once united the quasi-transcendentals of life, labour and language, is replaced by the contingency that now unites circulation, connectivity and complexity. Observing that a life of continuous emergence is also one in which production is continuously allied with destruction, such a life is lived as the continuous emergency of its own emergence. This account of contemporary biopolitics, together with its emergency of emergence, contrasts, in particular, with that offered by Agamben in his appropriation of Schmitt.

Key words
Agamben ■ biopolitics ■ circulation ■ contingency ■ emergency ■ Foucault

Species

1 *b.* In a manner or form properly belonging to a species or class, in respect of species, as opposed to individually. . . .
10 *Zool.* and *Bot.* A group or class of animals or plants (usually constituting a subdivison of a genus) having certain common and permanent characteristics which clearly distinguish it from other groups. . . .

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12 *a.* a particular kind or sort of coin or money
b. coinage, coin, money, bullion.

(*Oxford English Dictionary*)

A POLITICAL IMAGINARY is an ontopolitical specification of the nature of being, as such, construed in terms of the problematic of government and rule. A political imaginary of species-being is a biopolitical imaginary in which 'life' is taken as the referent ontopolitical object of governance, self-governance and rule.

From the outset, here, we have to draw a simple, almost banal, distinction between discourses of the human and discourses of life. In our tradition, beginning classically with Aristotle, the discourse of life has never been confined to the human (Lenox, 2001). Conversely, beginning again also with the Greeks, the discourse of the human has never been confined to mere life. Plato, for example, denied that it was sensible to contrast human and non-human things, creatures of our specific kind and all others. In Plato's writings there are instead 'real natures', but they are not identical with the things that partly remind us of them. Even we ourselves are not wholly identical with the Form of Humanity, though we are called to serve it. The Form of Humanity, for Plato, is divine reason, and we are indeed more human for Plato in so far as we think, and do, as divine reason requires.[1]

However problematically life and the human may be related, and their relation is as problematic as the terms themselves, they are not the same thing. Here, in the 21st century, under a rapidly evolving bioeconomical regime, we are dealing with a biopolitical imaginary governed by two, albeit intimately related, transformatory processes. The first concerns the transformation of what it is to be a living thing, which is taking place under the molecularization of life; the second is concerned with the transformation of life into value, in the form of commodity and capital, which is taking place under the globalization of capital. As the dictionary definitions that we employ as an epigraph to this article indicate, the very word 'species' indicates the close proximity of species as classification, species as biology and species as monetary value.[2]

One way of understanding the biopolitical imaginary of species-being, and in particular the spirit of bioeconomy that informs it – the question of valuing as such – is, however, to contrast it with the thought of those who challenge its very ontology. Offering quite different accounts of what it is to be a living being, such thinkers challenge the very 'categorial', 'biological' and 'value' terms employed within the biopolitical imaginary of species-being. There is a well-established tradition of contemporary philosophical reflection that now does exactly this.

It thinks the disruption of circulation, exchange and gift in the way that Derrida does as an an-economical giving of life (Derrida, 1992, 1995). Derrida speaks directly to the 'spirit' of (bio)economy, too, offering an entirely different vocabulary of haunting, specifically, for example, in his

deconstruction of Marx;[3] anyone at all familiar with Derrida will recognize that the word 'spirit' resonates with politically deconstructive implications (Derrida, 1994).[4] It opposes the metaphysics of being, specifically that of the molecular and economic account of species-being, to the ethics of alterity in which the bioeconomic circulation of life is utterly disrupted, in the thought of Emmanuel Levinas, by the proposition that existence is anchored, instead, in a radical dissymmetry of responsibility towards the Other (Levinas, 1991a, 1991b). Wittgenstein puts it similarly but a little differently: 'Man has the impulse to run up against the limits of language. . . . This running up against the limits of language is ethics' (Wittgenstein, 'On Heidegger, Being and Dread', cited in Wood, 1990: xiii). This contrary tradition contests the thought of value in the way that Jean-Luc Nancy thinks the 'Insufficiency of "Values"' and the significance of the invaluable (Derrida, 2005; Nancy, 1993, 2000, 2003, 2005). It challenges the calculable with the incalculable in the way that Jacques Rancière does in his polemical imaginary of the political (Dillon, 2002, 2005a; Rancière, 1995, 1999). It thinks outside the discourse of the human and of life in the way that Jean-François Lyotard (1993) thinks the inhuman. It thinks beyond the regulation of circulation, commodification and capitalization in the way that Bataille thinks expenditure beyond use-value, which critiques that combination of idealism and materialism in which the political imaginary of species-being is steeped (Bataille, 1988; Botting and Wilson, 1997). It thinks against the power relations established by consumer commodity capitalism and its contemporary molecularized biovaluing of life in the way that Baudrillard thinks 'defiant life', especially, for example, discussing that peculiar example of 'biopolitical' expenditure provided by suicide terror (Baudrillard, 1999a, 1999b, 1999c, 2003: 149–61). And it thinks beyond bare life in the way that Agamben, thinking against the anthropomorphic machine, also thinks life lived in terms of the messianic rather than the molecular promise (Agamben, 1998, 2004, 2005). There is, in other words, a very rich diversity of thought available here to contest the currently dominant biopolitical conflation of life not only with species-being but also with life as information and code; an account of life which instantiates a permanent emergency of emergence.[5]

We do not mean to suggest that these authors all think the same thing. Manifestly they do not, and it is important to acknowledge the profound differences that obtain between them. The power and diversity of this body of thought nonetheless testifies to the many ways in which the political imaginary of species-being, and its bioeconomic ethos and structure, are challenged ontologically as well as politically outside both the terms that it sets for itself and the confines, in addition, of traditional religious and anti-capitalist discourses. These, too, are now trapped by the materialist and idealist imaginary of species-thinking, of the metaphysics of 'value' in particular, in ways for which Derrida, for example, indicts both Marx and traditional theology.[6] What these authors nonetheless do share is a discourse of being which is not confined to life, and a discourse of belonging which

is not confined to value thinking, the politics of subjectivity and identity politics, or the rigours of (bio)economic exchange. Precisely for that reason these thinkers shed light on the ontopolitical composition of the bio-political imaginary of species-being and the spirit of bioeconomy that informs it.

If it is important to emphasize the differences that characterize these thinkers, it is equally important also to explain how and why they might be invoked in a debate about the political imaginary of species-being. It is not because their thinking about what it is 'to be' is more correct, or that they offer a more accurate representation of the conditions under which we are now living, as increasingly molecularized and capitalized beings. However perverse it may sound to modern ears, including that of modern religious as well as political discourse, these thinkers object, in one way or another, to the very violence of classification and valuation, and of speciation, as such. For them, naming, biologization and valuing are complexly related and in ways that violently elide the 'essence' of existence.

Recall the three dictionary definitions of species quoted in the epigraph to this article. They illustrate the deep complicity that obtains between classification, animation and monetary valuation. Species first means classification as such. Second, in zoological and botanical terms, species refers to the classification of living things. That itself presupposes a prior distinction between animate and inanimate things. This distinction also goes back to Aristotle. Since Darwin, however, species has almost become conflated in popular discourse with animate life, and in particular biological life. The very distinction between animate and inanimate things, as well as that between life and death, has, however, become radically problematized by the digital and molecular revolutions. These have, in turn, instituted a widespread account of life as informationalized, complex adaptive and emergent, in which, the code having been cracked, the morphogenic process itself now lies suspended between the dictates of nature and the technologies of manufacture and design. The discourses of the inhuman, posthuman and postvital, together with that also of some actor-network theory (Law, 2002; Law and Mol, 2002; Mol, 2003), and other discourses in the history of science, have not caused but reflect these profound changes (Daston, 2004). They too gesture towards the problematic ontological subscriptions at work in species-thinking.

In one way or another, Levinasian ethics, Nancy's insistence on the invaluable, Bataille's insistence on excess, Derrida's preoccupation with supplementarity, Rancière's account of the incalculable – to name but five of them – all point towards the significance of the singular rather than the species. In this they not only contest any anthropomorphic reduction of what it is to be a living thing, as well as any reduction of the 'human' to mere biological life, they also contest the very business of classification in favour of an insistence on the singular both in terms of 'event' and of existence. Moreover, they insist on the presence of singularity within species classification as that which continuously disrupts such classification. In terms of

political thought, Machiavelli is generally recognized to have done precisely this by inaugurating political modernity through theorizing the existence of factical freedom and the singularity of the revolutionary event – where factical freedom was neither the freedom from rule of negative freedom, or the freedom through rule of positive freedom, but the radical contingency of 'no-rule' which, for Machiavelli, establishes an historical dialectic of (political) form and (revolutionary) event.[7]

Theirs is no traditional transcendental argument appealing to a ground that exists outside the material manifestation of species-being. Neither do they contest the possibility, much less the calculative precision, of species representation – molecular, monetary or otherwise. But this tradition of thought, in many respects also deeply informed by, as well as contesting, Martin Heidegger's reflections on 'technology', is profoundly at odds not simply with the values but also with the very valuing process of our techno-scientific civilization, itself so intrinsically dependent upon classification or 'species' thinking as such (Heidegger, 1977).[8] Gesturing in different ways to the excess of being over its appearance as classified and calculated being, each one insists that this excess is always already there as an enabling factor in the very accounts that seek to exhaust the account of what it is to be a living thing through detailing its species classification as well as its economic valuation.

One has to be classifiable to exist in species terms. One now has to be classifiable as informational code to be admitted to the category of contemporary biological species. One has to be in circulation as value to exist as economic species. In contesting these intimately related processes, these authors clarify how the political imaginary of species-being demarcates and differentiates itself specifically by excluding from its very imagining the invaluable, the incalculable, the un-encodable, the irredeemably opaque, the defiant and the simply non-circulating. Theirs is in many ways a preoccupation with the not-knowable that contours every form of knowing.

And here is the rub. It is at this point that a philosophical discourse deeply orthogonal to the norms of our currently hegemonic species-thinking, one readily discounted by species-thinking on every count since it is a philosophical discourse that concerns what is unaccountable, nonetheless gains a deeply disturbing political purchase upon all 'speciating' by disclosing profoundly violent and disturbing political practices continuously at work within it. To employ a time-honoured distributive definition of politics as the authoritative allocation of values in which one should always ask who gets what, where, when and how – including the distribution of waste as well as that of value – these philosophers of the limit do not merely serve to recall that processes of valuation are always unevenly distributed, or that every process of valuation is also a process of de-valuation (Wood, 1990). In other words they do not simply challenge the inequitable distributive outcome of speciation – all classifying implying hierarchy, all valuing instantiating a distributive economy.

They go two disturbing steps further. They demonstrate how valuation as such excludes the invaluable. Excluding the invaluable, they also explain, is a profoundly violent process. For many this is the point at which such thinking of the extremity loses all grip on practical matters (Megill, 1987). Conversely, for others it is the point at which it gains its most critical and disruptive purchase on practical affairs. For exclusion of the excess, the incalculable, or the inhuman is not, they all observe, a passive, a peaceful or a neutrally instrumental affair. A grammar of enmity is simultaneously always installed alongside grammars of belonging to a class, a species or a value. Every discourse of value must not only presuppose the invaluable, it simultaneously also institutes an implicit or explicit discourse of threat posed by the invaluable and unclassifiable to speciating as such.

Ontologies are of course always grammars and, in the process of installing material economies, grammars also install moral economies. In this instance the moral economies of the currently dominant biopolitical imaginary of species-being concern the very basic questions of what is classifiable, what is classifiable as a living thing and how value is assigned to life. Here, since categorization concerns assignment to the category of living thing, the eligibility for life becomes specified alongside all the diverse and changing eligibilities to which inclusion in the category of living thing entitles anything so designated. These are not (only) arcane philosophical questions. They are immediately lived political issues, and they are often also lethally dangerous ones as well; from race, in relation to which Foucault's last lecture in *Society Must be Defended* (Foucault, 2003) first taught us this basic lesson (Foucault, 2003; Dillon, 2008b), through the war on terror to insurance and health care. However much the purchase of insurance, for example, is an economic transaction, the policy-holder is immediately also enrolled in a moral economy of information-disclosure and behavioural propriety (Baker, 2000). Consider the last time your insurance was revoked for non-disclosure, or consider the discounted house insurance premium you were able to extract for securing your property according to approved standards.

In *Society Must Be Defended*, Foucault pursued his reflections on the logics of formation that also drive biopolitics into recuperating the 'death function'. The logic is inescapable. If it is to promote life, biopolitics must continuously assay what it is to be a living thing. That assay must not merely specify what can be included in the category of living thing. It must also assay living things for those properties that aid life development and those that may inhibit life development. Life cannot be promoted if its properties, propensities and potentialities are not themselves evaluated. In that process biopolitics must necessarily also specify anything that is inimical to the development of life. Some life is better able to be developed than other life. Some life may be resistant to development or simply incapable of it. Some life may barely show up as living at all, at least on the indicators established to detect and measure life. And there are life forms that may be fundamentally inimical to life itself. Weighing life is not something that only

biopolitics does. It is how biopolitics weighs life as species-being which differentiates the biopolitical imaginary.

Whatever else it must do, the bioeconomy of the biopolitical imaginary has therefore to weigh the forces inveighed against life as well as those promoting its development. And that includes lives which for one reason or another prove incapable of, or even actively resistant to, development. Any life that cannot count, any life that is beyond counting, any life that exceeds classification, and any life that ultimately lacks transparency to the indicators that measure what it is to be a living thing causes fundamental problems for biopolitics. Life inimical to life, because it either exceeds or fails the grammars determining what it is to be a living thing capable of development, is what sets the biopolitical grammar of enmity going. It is no more ferocious than when it encounters the incalculable, the invaluable or the simply opaque to its processes of classification and valuation. This is also where monstrosity arises for it and fear grips it. Its grammar of enmity is as micro-political, remorseless and unforgiving as the technologies of biopolitical governance are diverse, heterogeneous and adaptive. Foucault (2003) first recognized this when observing how biopolitics required race to provide it with the mechanism it needs to demarcate life in the process of pursuing its vocation to promote life. He recognized it also in the case of the hermaphrodite Herculine Barbin (Foucault, 1980).

There is nonetheless an intriguing – technically speaking deconstructive – paradox at work here. It seems to bear out the philosophic challenge to the biopolitical imaginary to which we have only made a gesture. For, if we describe the spirit of capitalism inspiring the biopolitical imaginary's bioeconomy as a desiring machine motivated by the regulative ideal of perfect liquidity, such liquefaction aims to install a continuous free flow of circulation, or universal exchange, back and forth between species as classification, as biology and as capital value. The reason is clear. It is the very uncanny congress between these three that engenders and circulates capital value in the first place. Such liquefaction nonetheless transcends the species-thinking upon which it is actually engaged. It effects the dissolution of classification and category, ultimately submitting each to the standard of pure liquidity. An ontology of excess thus remains sequestered in the very species-thinking so otherwise hostile to that which resists species-thinking, in that the logic of species-thinking ultimately exceeds the classification, biologization and valuation which comprises it.

Quasi-transcendentals of the Biopolitical Imaginary of Species-being

Once the move from the discourse of the human to the discourse of life is made, the discourse of valuation ineluctably follows suit. Valuing life need not equate with valuing the human. The contrary may very well be the case. Ask any animal liberationist or a Gaia theorist. Remember, too, that we are dealing in the biopolitical imaginary of species-being. 'Species' means classification as such, classification as living thing and classification as

value, specifically monetary or capital value. These three are locked into a very tight and radically interdependent triangulation. Change one point of the triangle and you reconfigure the whole assemblage. For example, change the very business of classification and you change the referent object to be classified. Change the referent object of classification by changing the very business of classification and you change the referent object to which value is to be ascribed. Similarly, change the process of valuation and you re-order the process of classification as well as the referent objects so classified. Or, finally, change the referent object of concern and you impact on the processes of classification and evaluation. These three poles of 'speciation' thus comprise a radically interdependent force field in which the changing correlation of forces transforms the composition of the respective 'trig' points. Each of the three – classification, living thing and valuation – operates in mutually disclosive need of the other two.

If the ethos of the bioeconomy is that of universal exchange between species as classification, species as living thing and species as capital, the whole configuration of the triangulation of speciation shifts as the business of classifying changes. This is precisely what the informationalization of life did when it began to classify life in terms of digital and molecular code. What it is to be a living thing was changed. And so also were the processes by means of which value could be ascribed to, and derived from, living material newly understood, as the very order of order is now regularly claimed to be, as informatted.

The following section draws heavily on the inspiration of Foucault, but it does not slavishly follow him. In the spirit of Foucault 'the experimenter' (Foucault, 1994: 240) it further reflects on the nature of the biopolitical imaginary of species-being, specifying in particular how it has evolved quite distinctive quasi-transcendentals – reified epistemic objects or assemblages – which now constitute its emergent field of biopolitical formation and regulation as well as capital evaluation.

Quasi-transcendentals

Any account of the biopolitical imaginary of species-being in the modern age must therefore pay homage to Foucault's genealogy of biopolitics as well as his reflections in *The Order of Things* (1989). For it is there that we first begin to learn what happens to regimes of governance as well as discourses of the human, especially those of subjectivity, when the discourse of species 'life' becomes the referent object of politics, and politics becomes equated with the rule of species-being. But, just as Foucault first taught us what happens when life becomes the referent object of government, so he first teaches us what also happens when government is linked to freedom; where freedom is comprised of a changing assemblage of techniques – a complex of adaptive systems – by means of which rule extends and develops the arts of governing (Joyce, 2003; Rose, 1999).

In particular we are inspired by a pithy observation that Foucault made in the Preface to *The Order of Things*, in which he says that, 'between the

already encoded eye and reflexive knowledge there is a middle region which liberates order itself' (1989: xxi). Here, Foucault observes how a new 'order of the real' first makes its impression, later to be ontologized, by reflexive knowledge, and reified, through cultural encoding, into a quasi-transcendental domain subject to its own epistemic laws, knowledge of which allows scientifically guided intervention into that domain. In such a way, he says, something called 'the economy', for example, emerged. 'Quasi' indicates how such domains require a complex cultural and epistemic apparatus to acquire their reified status. They nonetheless also retain a profoundly ambiguous status; on the one hand an autonomous object of knowledge, on the other a field that can be transformed through active intervention informed by knowledge of how it operates.

When life as species-being and freedom as technique were first brought into the domain of rule, technologies of freedom were first linked then also to changing understandings of 'life' as species-being. Governing through freedom thereby became susceptible to changing accounts of species-being, because the life of species-being and the rule of freedom are so intimately implicated in biopolitical governance and regulation. Posing as unconditioned conditions, quasi-transcendentals always turn out to be comprised instead of historically conditioned substantive features.

Molecularization has indeed transformed our understanding of what it is to be a living thing – so also has digitalization. The confluence of the digital and molecular revolutions has thus brought about a new order of the real in relation to the life of species-being in which governing through freedom is undergoing significant transformation and change as well, sharing in, and drawing on, these new molecularized and digitalized accounts of what it is to be a living thing. In the process the modern analytics of finitude has begun to mutate. Vast new fields of positivity and of empiricity have emerged in which the correlation of the finite and the infinite, and of chance and necessity, are being reconfigured

Recall that the biopolitical imaginary of species-being is that ontological understanding of being which takes 'life' as its referent object for the purpose of specifying governance and rule – one might also add, for the purpose of establishing a system for the authoritative allocation of values to, as well as among, living things. Taking our lead from *The Order of Things*, in which Foucault specified how life, labour and language comprised the quasi-transcendentals of Man, we conclude that a new order of the real has emerged represented less by the politics of Man and more by what Nikolas Rose describes as the politics of 'life itself'. Equally, we conclude that this new order of the real is comprised of a different set of quasi-transcendentals: those of 'circulation', 'connectivity' and 'complexity'. Moreover, what lends coherence to these three quasi-transcendentals is not the master discourse or science of Man. As Foucault notoriously anticipated, at the end of *The Order of Things*, Man was a peculiarly modern historical figure already in the process of being washed away. If the proper study of Man was once said to be Man, ultimately the proper study of the complex

adaptive behaviour of species-being as emergent – whose positivities are now specified in terms of circulation, connectivity and complexity – is that of the 'contingency' universally claimed to pervade the living of living things these days.

In lives obliged to be free by the ontopolitical imaginary of species-being, that freedom is increasingly understood also in terms of the informationally transacted emergent properties that are now said to define what it is to be a living thing. This does not merely extend the realm of risk up to the limit of risk, as some have argued, it ontologizes contingency as the foundation of social form.[9] However much freedom is an artefact of liberal regimes of power, it has ineluctably also become linked in biopolitics to the prevailing cultural and scientific expression of what it is to be a living thing. Governing through freedom increasingly thereby becomes governing through contingency. Such governing through contingency is increasingly also governing through emergency, since the complex adaptive emergence of the contemporary understanding of what it is to be a living thing is the emergency of its continuous emergence.

Governing through contingency necessarily, therefore, operates through a hypertrophy of insecurity in which the biopolitical powers of transactional freedom are continuously evolved with the powers of surveillance and emergence in the positive development of a permanent state of emergency – an emergency not derived from a base distinction underlying law but from the infinite empiricities of finite life understood as a continuous process of complex adaptive emergence. In the process of emergence, production is, of course, indissolubly linked also with destruction.

The emergency of emergence is also simultaneously both local and global, for its success locally is seen to be radically dependent upon its extension globally:

> No longer is our existence as states under threat. Now our actions are guided by a more subtle blend of mutual self-interest and moral purpose in defending the values we cherish. In the end values and interests merge. If we can establish and spread the values of liberty, the rule of law, human rights and an open society then that is in our national interests too. The spread of our values makes us safer. (Blair, 1999)

The national and international policy implications of the politics of life itself were therefore clearly enunciated well before 9/11 gave expression to them in terms of the war on terror.

There is space here only to posit this emergency of emergence that now increasingly governs through allying freedom and contingency in a hyperbolicized politics of insecurity at home and abroad (Dillon and Reid, 2009). For the moment, we restrict ourselves to a summary account of the quasi-transcendentals of this 'politics of life itself', and the changing nature of the contingency upon which they ultimately depend.

Circulation

In his genealogy of biopolitics, Foucault also alerts us to the base distinction between the discourse of the human and the discourse of life. From the 18th century onwards Foucault notes how biological being (*être biologique*) comes to constitute something called the human species (*espèce humaine*). The expression '*espèce humaine*' is fundamentally different from the hitherto legally and politically important expression '*le genre humain*' (Foucault, 2007, 2008). Note that the root of *le genre humain* is '*gens*'. It refers to the great tradition of Roman and medieval law of *jus gentium*. Usually translated as 'the law of nations', and extensively treated in the work of two early modern international jurists, Hugo Grotius and Emmerich de Vattel, the *gentium* of *jus gentium* invokes the idea of the juridico-cultural notion of a 'people' or 'peoples' belonging together, especially in respect of law and custom, not the biological notion of 'species' (the root of *espèce*) in which belonging together is furnished by means of shared biological properties.

In the move from *genre* to *espèce*, Foucault is thus drawing attention to a transformation of the very understanding of the human as it becomes classified in terms of species-being; and political power begins to be exercised in and through the biological mass which constitutes the species rather than the juridico-cultural processes of belonging said to constitute the *gens* of *gentium*, or '*le genre humain*' (Bartelson, 1995).

The second broad lesson to be drawn from Foucault's account of biopolitics is the emphasis he places, in the first two lectures of the lecture series *Sécurité, Territoire, Population* especially, on circulation and contingency. We unpack and extend that concern to include connectivity and complexity.

The purpose of biopower is fundamentally, therefore, the facilitation and optimization of 'circulation' (Foucault, 2007: lecture 1). Circulation is understood in the widest sense of the term. It begins, of course, with the commerce of economic exchange, whence Foucault derived his initial analysis, but it is clearly also extendable to the most general intercourse between living things as well as between living things and other things, specifically, for example, in the form of information. This preoccupation with circulation also poses the problematic of how to maximize good and limit bad circulation. That in turn is closely related to the problem of governing too little and governing too much (Dean, 1999; Rose, 1999: 70).

These are two of the core aporias of biopolitical regulation and governance. Irresolvable difficulties, they do not result in stasis. Quite the contrary. Aporias, like power, are productive. They are dynamically lived out through the changing figures of political speech and epistemic discourses that comprise the political rationalities and governmental technologies of governance (Dillon, 2008a).

It follows that the problematic of circulation includes diverse modes of circulation and not just things in circulation (Lobo-Guerrero, 2008). One singularly important contemporary example of the way in which a mode of

circulation radically impacts on things that circulate is provided by the liquefaction of 'information'. A complex of conceptual as well as scientific and technological processes has been involved in the liquefaction of information. A prerequisite was the reduction of language to communication and the differential operation of the 'sign'.[10] Communication had then to be reduced cybernetically to information and systems of information exchange, processes critically related also to the molecularization of life (Fox Keller, 2000; Kay, 1989, 1993, 2000a, 2000b). Thereafter information was reduced to digital bites electronically, and molecular code biologically. In the process of that complex process, other processes – from economy to military strategic organization – have also been utterly transformed (Dillon, 2004; Dillon and Reid, 2001). Liquefaction of information served the commodification of language. Liquefaction and commodification via information also serves to intensify the liquefaction and commodification of life understood informationally. Circulating bodies these days simply are bodies-in-formation.[11]

One of the staple fields of positivity and empiricity for biopolitics is therefore that of circulation: every aspect of how species-being circulates and every circulation that affects the welfare of species-being, including every conceivable transaction and exchange by means of which it is capable of being related to every other form of matter both actual and virtual (Foucault, 2007: Lecture 1). This development both reflects and further ramifies the relation between the actual and the virtual, thereby also foregrounding the virtual over the actual.[12] Freedom becomes the freedom simply to be in circulation; freedom reduced to the transactions which constitute circulation virtually as well as actually.

Connectivity

Remarkably, considering that he was writing in the 1970s rather than the 1990s, Foucault also posed this as a problem of the connectivity and operation of networks (*réseaux*), and of how the balance of good and bad circulation within them is to be optimized; recognizing that, given the very ways in which networks operate, it is not possible completely to eliminate bad or unwanted circulation (2007, Lecture 2). Here, then, while economic circulation and exchange, together with commodification, is obviously fundamental, Foucault locates economic circulation within a much broader account of circulation, such that the economy relies upon other circulatory factors and considerations.

It is clear from Foucault's accounts in those lectures, and in the allied series *The Birth of Biopolitics* (Foucault, 2008) as well, that while addressing circulation in the widest possible way Foucault is also addressing the complex of relationality established by processes of circulation. Circulation is also a function of connectivity, a matter in effect of 'propinquity'. Circulation helps engender new forms of nearness, proximity and association different from those of cultural specificity or territorial contiguity. Global producers and consumers are, for example, caught in a web of co-relation, implication and obligation that transcends the traditional markers of

territoriality, language and culture. Virtual space similarly constitutes an entirely different space of propinquity. One may feel closer to one's Internet lover than one's terrestrial partner. Consider also, in this respect, Paul Rabinow's reflections on biosociality (1999).

Today, however, biopolitical rule through freedom responsibilizes through the orchestration of the radical relationality of the circulation of species-being as emergent life, globally as well as locally. Well-regulated liberty is increasingly understood to be dependent on the 'resilience' that such life and its complex national and international infrastructures may display.[13] The moral economy of prudence associated with insurance also, for example, comes under pressure from these and allied developments in which freedom is urged to embrace risk if it is to remain resilient.[14]

The more things circulate the more they become associated. The more they become associated the more they become connected. In the process, the more connectivity can be understood and organized in novel ways. From this has emerged the very science of networks, a form of new physics devoted to the epistemic characteristics of different forms of association, such as those of power networks and scale-free networks (Barabassi, 2002).

Complexity

The more things circulate and are connected, however, the more complex they also become. The difference between complicated and complex is by now well established and needs little rehearsal. Complicated refers to closed systems of many elements. Complex refers to dynamic open systems whose operations engender more than the sum of their parts. Open systems, it is said, are characterized by emergent properties, phase changes and non-linear transformation and change. They are said to display these characteristics, in part, because their initial conditions cannot be fully known, and in part because they are said to operate through informational transactions on the basis of which they complexly adapt in novel and innovative ways. While the vocabulary of connectivity and complexity is not Foucault's, we nonetheless think it consistent with the operational dynamics and generative principles of formation that characterize the biopolitical imaginary of species-being that takes 'life' as its referent ontological and epistemic object of being. The vocabulary of circulation, connectivity and complexity is certainly the vocabulary of the new global economy and of the emergent bioeconomy in particular – especially in the concerns expressed, for example, with innovation cycles, convergences and linkages, rapid and discontinuous change, and identifying bottle necks to the emergence of a new bioeconomy (e.g OECD, 2006). Complexity, like circulation and connectivity with which it is intimately allied, thus also comes to constitute a quasi-transcendental for the biopolitical imaginary of species-being.

The Contingent

Biopolitical mechanisms are also distinguished by their mode of operation. Initially preoccupied with species-being in the form of population, rather

than molecular structure, Foucault noted how preoccupation with population revolved around taking the measure of the aleatory or contingency of population in the first instance, and – in ways well documented now by Ian Hacking (1990, 1995) and others – in calculating statistically the aleatory character of births, marriages and deaths. Concerned with collective phenomena, then, whose economic and political effects only become pertinent at the level of the mass, biopolitically relevant phenomena are, Foucault notes: 'phenomena that are aleatory and unpredictable when taken in themselves or individually, but which at the collective level, display constraints that are easy or at least possible to establish' (2003: 246). Biopolitics is therefore concerned primarily with the 'essentially aleatory events that occur within a population that exists over a period of time' (2003: 246). Such mechanisms include 'forecasts, statistical estimates and overall measures' (2003: 246). Equally important and distinctive is the way these mechanisms are designed to operate: 'their purpose is not to modify any given phenomenon as such, or to modify any given individual in so far as he is an individual, but, essentially, to intervene at the level of their generality' (2003: 246). In as much as biopolitics is a security *dispositif*, he says, '[S]ecurity mechanisms have to be installed around the random element inherent in a population of living beings so as to optimize a state of life' (2003: 246).

But contingency has a history. It pre-dates and now post-dates the aleatory preoccupation with population statistics. Aristotle teaches us that 'Being is said in many ways'. So is contingency.[15] It is important to emphasize also that contingency is not a mere epiphenomenon of a certain social formation of industrialization in the way that it is enframed, for example, by Beck and other risk sociologists.[16] It is an ontological as well as an epistemic category. In particular it is important to emphasize that contingency's provenance and prominence these days is founded in its association with the biopolitical imaginary of species-being – specifically, what it is to be a living thing – and the ethos and structure of the bioeconomy in which the properties of living things are employed to create value.

After Darwin, species-being becomes emergent being. Species life, understood as evolutionary being, is life understood as emergent being. Species life understood as emergent being is radically contingent being; that is to say ontologically contingent. Emergent being is thus radically contingent being. Contingency, in short, is less *one* property of life as emergence. It is *the* property of life as emergence, both its ontological condition and its adaptive, epistemic, challenge. Thus governing biopolitically turns contingency – the definitive property of life in the biopolitical imaginary of species-being – into the definitive epistemic object of rule.

Species-being as emergent life must therefore find ways of governing contingency since contingency is the condition that, in turn, governs its existence. Radically contingent, that is to say ontologically contingent since its very event is a contingent event, species-being as emergent being is also contingent in as much as its life of evolutionary transformation and change is also non-linear. The epistemic challenge that it is said to face in seeking

to govern the emergent conditions of its own very condition of possibility as species existence, species-being must know and govern through command of contingency. The proper study of the politics of life itself thus becomes the scientific study of the contingent.

The digital and molecular revolutions have not only entrenched this account of species-being. Their conflation of what it is to be a living thing with the universal exchange of information has also extended the category of living thing to forms of living being that radically transcend ontological distinctions between animate and inanimate matter, in the process of problematizing, as well, traditional species classifications and the core ontological distinction ultimately also between life and death (Franklin and Lock, 2003).

In short, traditional classifications as well as traditional modes of classifying – the very reliability of taxonomizing as such – become radically problematized as what it is to be a living thing becomes equated with information or code. The reason is that this movement is reversible. Participating in the universal exchange of information begins to qualify any assemblage for inclusion in the category of life-like thing. Complex adaptive systems – informational assemblages – are in fact distinguished as complex in that they display life-like properties. In that sense, they are understood to be a form of species-being – indeed, complexity thinkers would equate species-being with the properties of complex adaptation, which properties are derived from the universal exchange of information or code in the open transaction of which transformation and change become non-linear, that is, 'complex'.

In sum: the more things relate, the more they circulate; the more they relate and circulate, the more interconnected they become; the more things circulate and become interconnected, the more complexity they are also said to display. Finally, the more they interconnect, circulate and complexly adapt, the more aleatory they become. Here what Marx called the '*perpetuum mobile* of circulation' (1976: 226), which defines capitalism, is embedded by Foucault within a wider *perpetuum mobile* of biopolitical circulation and radically contingent, emergent, reproduction whose criterion of success is variously said to be fitness or resilience.

Giorgio Agamben's reflections on 'bare life', taking the issue of biopolitics further by posing a broad and messianically inflected indictment of contemporary biopolitics, have received widespread critical acclaim and attention (Agamben, 1998, 2005; Dillon, 2005b; Ojakangas, 2005). This allows us to note in passing that there are other versions of biopolitics in addition to Foucault's, including not only Agamben's but also those of the Italian schools of Virno and Negri as well as Roberto Esposito (Esposito, 2008; Negri and Hardt, 2001; Virno, 2004). Remaining closer to Foucault, however, we pursue the biopolitical imagination in a different direction, asking what happens to regimes of governance that take life as their referent object when what it means to be a living thing is transformed by processes of molecularization and digitalization (Dillon and Lobo-Guerrero, 2008).

One means of pursuing that line of reflection is furnished by discourses on the postvital and the posthuman (Doyle, 2003; Fukuyama, 2003; Haraway, 1997; Hayles, 1999; Waldby, 2000). Another is that provided by what Nikolas Rose aptly calls molecular biopolitics (Novas and Rose, 2001; Rose, 2001, 2006). To some degree we have drawn on both, but we are primarily concerned here with the molecularization of biopolitics. Our interest specifically concerns how the molecularization of life compounds the contingency, circulation and complexity that already preoccupies the biopolitical imaginary of species-being, in particular for the purposes of continually adding value to species existence. Molecularized life is not more certain life. It is differently contingent life.

Conclusion

At the end of the *Order of Things* Foucault imagined that 'one can certainly wager that man would be erased, like a face drawn in the sand at the edge of the sea' (1989: 385). We have observed in effect how the quasi-transcendentals of labour, life and language that he identified as demarcating 'Man' have mutated into information, animation and code.[17] In the process, circulation, connectivity and complexity have emerged as a new set of quasi-transcendentals. Thus the sciences of circulation specify a new terrain of value across which life as such, and not simply 'Man' as a living being, is now ordered. They offer different accounts of dissemination, proliferation and propagation, especially of how new risks, threats and dangers are constituted and rapidly amplified by the very same systems that comprise and circulate life. The new sciences of connectivity give novel accounts of global-local propinquity, adhesion, adherences, proximities, associations, alliances, virtualities, realities and belonging that are now said to constitute a permanent state of emergency of the life of emergent becoming. The new complexity sciences study the life-like properties of complex adaptive systems and offer novel accounts of the spontaneous non-linear phase changes and animation that are now said to constitute the vital signs of life. What lends unity to these new positivities and empiricities – these new fields of knowledge – is no longer Man, but contingency.

Whereas for the governmental Foucault, therefore, freedom was an artefact of liberal regimes of power/knowledge (hence the phrase ruling or governing through freedom), for the biopolitical Foucault, as species replaces subject, another worm is seen to enter into the liberal ordering of things. For when rule takes 'life' as its referent object, freedom as an attribute of species-being becomes critically dependent on the specification of species existence. Rule through freedom that takes life as its referent object begins to shift its character accordingly. Above all it becomes that transactional freedom, said to be characteristic of life-like processes, which is grounded in contingency.

Freedom founded in radical contingency changes the very nature of the freedom through which biopolitical rule progresses, as well as the techniques that it employs. It is that which accounts for the astonishing

expansion and complexification of the domain of risk, the emphasis on resilience and ultimately also the hypertrophy of in-security – the emergency of emergence – that began to characterize liberal societies long before the war on terror precipitated it into a juridical state of emergency. Among other things, it is the logic of the care for life that is driving pre-emption globally as much as it is health care prevention locally (BMA, 2005).

What finally has also to be emphasized here, in contrast to the ostensibly benign implications of making life live, is the way in which the life which 21st-century biopolitics seeks to make live is a life defined by the emergency of its contingent emergence. Here, governing through contingency – a contingency which, in turn, defines its freedom – is not simply the governing of the emergency. It is increasingly also a matter of being governed by the emergency, in ways that inscribe the logos of war into the logos of peace via the discourses of security that now proliferate throughout the politics of 'life itself' (Dillon and Reid, 2009). Newly challenged to govern through contingency, liberal governance finds itself thus governed by contingency – a prospect that terrifies it, because, by its own account, it is life, itself, which thus threatens life in the form, ultimately, of the incalculability of life which continuously returns to haunt and disrupt the orderly power/knowledge of circulation, connectivity and complexity through which the politics of life now promises to secure life.

Notes

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1. For further discussion see Clark (1999).

2. On the complex issue of naming and how, among other things, classification enrols in a material economy of exchange see Derrida (1999).

3. See also, of course, Derrida's (1989) reflections with and against Heidegger.

4. In contesting animality, Derrida also contests deep-seated anthropomorphic prejudices sequestered in traditional ontological accounts of what it is to be a living thing. See, for example, Derrida (2003).

5. For a sustained analysis of how the biopoliticization of the liberal way of rule and war are themselves governed by this 'emergency of emergence', see Dillon and Reid (2009).

6. On Derrida and religion see, for example, Derrida and Vattimo (1998), Anidjar (2002), de Vries (1999), Davis et al. (2005). For an expert summary of Derrida's move towards the religious, and an acute intellectual engagement with it, see Bradley (2006).

7. Some, like Leo Strauss, thereby accuse him of inaugurating a fully technicist account of politics. Others, like Althusser and Vatter, celebrate his achievement. None deny the significance of Machiavelli as an inaugural moment for modern politics (Althusser, 1999; Strauss and Althusser, 1995; Vatter, 2000).

8. While steeped in Heidegger and directly debating with Derrida, Bernard Stiegler (1998) advances a different argument from what he calls originary technicity.

9. In a way that seems consistent in some degree with the point we are arguing here, François Ewald hypothesized that precaution was beginning to emerge as a new principle of insurance from the erosion of moral obligations which have been 'swallowed up in public ethics'. Ewald's hypothesis is formulated in relation to the way uncertainty is now being reinterpreted, 'in the light of even newer science' (2002: 274). He also observes that: 'a new dimension of time appears with the precautionary principle in which the notion of "accident" is eroded because it no longer corresponds to the temporal span between cause and manifestation of harmful effect' (2002: 288).

10. Whatever communication may be said to be, and whatever communication may be said to do, language is commonly understood in some philosophical traditions to be always already more than communication. The classic statement to this effect, in which language is understood instead as 'disclosure', is that provided by Martin Heidegger (1971a, 1971b).

11. The term is used in Dillon (2003).

12. The distinction between the virtual and the actual is a complex and commonly misunderstood one. Deriving its contemporary prominence and articulation from the work of Gilles Deleuze, an excellent account of its derivation and its operation there can be found in Ansell-Pearson (1999, 2002).

13. See, for example, the 'UK Resilience Home Page' of the Civil Contingencies Secretariat of the UK Cabinet Office for further details: http://www.ukresilience.info/index.shtm (consulted 21 September 2008).

14. See also the Downing Street Strategy Unit Report on Risk: *Risk. Improving the Government's Capability to Handle Risk and Uncertainty*, URL (consulted September 2008): http://www.strategy.gov.uk/downloads/su/risk/report/downloads/su-risk.pdf

15. The earliest accounts of contingency also go back to the Greeks and in particular the syllogistic argument of what became known as the Master Argument. From three premises having to do with necessity and contingency, the Master Argument derived a contradiction which appeared to imperil freedom. For a close philosophical interrogation of the Master Argument, see Vuillemin (1996).

16. Beck's *Risk Society* (1992) thesis has been substantially challenged by empirical accounts of insurance. See, for example, Ericson and Doyle (2004) and Bougen (2003).

17. The life of biology to which Foucault referred here was organic. It has, of course, since become molecular.

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