ABSTRACT In this paper I identify specific historical trajectories that are directly contingent upon the deployment and use of new media, but which are actually hidden by a focus on the purely technological. They are: the increasingly abstract and alienated nature of economic value; the subsumption of all labour - material and intellectual - under systemic capital; and the convergence of formerly distinct spheres of analysis –the spheres of production, circulation, and consumption. This paper examines the implications of the knowledge economy from an historical materialist perspective. I synthesise the systemic views of Marx (1846/1972, 1875/1972 1970 1973 1976 1978 1981), Adorno (1951/1974 1964/1973 1991; Horkheimer and Adorno 1944/1998; Jarvis 1998), and Bourdieu (1991 1998) to argue for a language-focused approach to new media research and suggest aspects of Marxist thought which might be useful in researching emergent socio-technical domains. I also identify specific categories in the Marxist tradition which may no longer be analytically useful for researching the effects of new media.

KEYWORDS hypercapitalism • Marx • Adorno • knowledge economy •
Introduction: New media, value, capital, and other “things”

Today’s information and communication technologies (ICTs) are most easily viewed as a collection of interconnected, objective “things” that constitute the new and emerging techno-social domains. But I am advancing an argument here as to why research into new media might set aside, as far as possible, the “things” that comprise technical infrastructure to focus on the social processes that are conditional upon, and conditioned by, the presence and use of these new things. Most especially, I argue for a focus on language that people produce about these things, and about the ideas, artefacts, and social circumstances evident in language. Silverstone (1999: 10) argues that ‘[r]evolutions are usually more rhetorical than real’, and this is a central assumption of the argument I present here: I assume that the “information revolution”, along with its “knowledge economy”, is a mostly obfuscating rhetorical construct of language produced by literate, language-related societies. This is most obvious when one considers that, ‘since language evolves out of the impact between the material and the conscious modes of being, it follows that as material conditions change the forms given by language to consciousness also change’ (Halliday 1993: 8).

Material conditions have changed, most conspicuously in terms of our new media, their uses, their pervasiveness, and their effects. While the notion of a “knowledge economy” would appear to be new, its wide currency serves to highlight the intimate relationships between the nature of knowledge and new media throughout human history. At a more abstract level, the notion of a knowledge economy also highlights the progressive ‘technologisation’ of language and its contextual counterpart, the progressive ‘institutionalisation’ of valorised ways of speaking and knowing (cf. Bourdieu 1991; Fairclough 1992: 215-8; Iedema 1999; Lemke 1995: 58-65). In fact, institutionalised knowledges, and the ‘knowledge monopolies’ that pertain to these, have been fundamental to social organisation throughout human history (Innis 1951: 4-32). Our current form of social organisation is called “capitalism” and its organising principle is the idea that capital, which is most usually considered to be various configurations of productive “things”, is the generative source of value. But that is quite a misleading conception.
Marx shows, quite clearly, that ‘capital is not a thing, it is a definite social relation of production pertaining to a particular historical social formation, which simply takes the form of a thing and gives this thing a specific social character’ (1981: 953). This is a point not lost on Bourdieu, who emphasises the need to avoid a ‘substantialist reading’ of the term “capital” (1991: 67-8; 1998: 3). Nevertheless, mainstream economic thought has treated capital, since well before Marx’s time, as various sorts of “things”: plant and equipment, linen and cotton, money, golf balls, and so on (Marx 1976: 169). To avoid confusing these two distinctly different conceptions of capital, I shall distinguish between capital as a specific form of social relations, hereafter systemic capital, and capital as a collection of ‘self-valorising things’ that are deployed in pursuit of surplus value (1976: 255), which I will call phenomenological capital.

History, language, new media, and society

“You all remember,” said the controller, in his strong deep voice, “you all remember, I suppose, that beautiful and inspired saying of Our Ford’s: History is bunk. History,” he repeated slowly, “is bunk.” Aldous Huxley - Brave New World

The main contribution to knowledge about new media that I wish to make in this paper is to identify specific historical trajectories that are directly contingent upon the deployment and use of new media, but which are actually hidden by a focus on the purely technological. They are: the increasingly abstract and alienated nature of economic value; the subsumption of all labour - material and intellectual - under systemic capital; and the convergence of formerly distinct spheres of analysis –the spheres of production, circulation, and consumption. Each of these trajectories is interdependent with the others, and so cannot be considered separately. Nevertheless, I will outline the parameters of these trajectories, realising that as my argument progresses, their parameters become blurred as I synthesise the social implications of their relatedness. They become blurred because the trajectories I identify appear to be contingent upon a broader, more invisible, more important convergence: a convergence in the social functions of new media and language.
Increasingly abstract value: alienating value from its source

Political economists of all stripes have long argued that value is at least partly a function of what people do; that economic value and human activity are in some way related (Langholm 1998: 118-35). However, the relationship between value and various aspects of what we now tend to call “labour” has been a contentious matter throughout history (1998: 118-35). The central tenets of the polemic reach back into history as far as Aristotle and beyond (e.g. Aristotle 1962/1981: 88-9). In the classical period of political economy, labour was largely considered to be a factor in the production of material commodities, linen and cotton for instance, which are themselves considered to be the bearers of particular ‘use-values’ (Marx 1973: 177). Because of their use-values, commodities can be turned into ‘exchange-values’ which are ‘ideally transformed into money, not only in the head of the individual but in the conception [of value] held by society’ (Marx 1973: 187). Money can then be transformed back into phenomenological capital, the means of producing more commodities (Marx 1976: 187). This is the process of ‘self-valorization’, whereby particular “things” - the means of production - appear to increase their value on behalf of their owners in a seemingly autonomously manner (1976: 255). Marx caused much controversy by identifying contradictions in the very notion of “labour” itself (e.g. 1875/1972: 383), while identifying human interaction with nature as the generative source of all values rather than as merely a factor in the production process.¹ The polemic surrounding the relationship between labour, capital, and value continues, albeit in increasingly muted terms.

Meanwhile, especially since the ascendancy of digital ICTs, the monetary system of exchange appears to have taken on an autonomous trajectory and existence; it appears to have become an end in itself. From one perspective, it may look as if the ‘creation of wealth’ is ‘finally emancipating itself from the old, constraining and vexing connections with making things, processing materials, creating jobs and managing people’ (Bauman 1998: 44). But

¹ Marx’s comments have often been misconstrued in this respect: ‘Labour is not the source of all wealth. Nature is just as much a source of use values … as labour, which itself is only the manifestation of a force of nature, human labour power’ (Marx 1846/1972: 382). Marx’s critique has to do more with the normative status of such
Bauman refers to a global system of wealth constituted largely by speculative exchanges in which ‘the illusion of wealth’ is created in ‘a global system of self-valorising abstractions’ (Graham 1999: 489, emphasis added). Today, this system of financial sector abstractions ostensibly refers to nothing other than itself. It derives its conception as a system of “wealth creation” purely by virtue of the experts who concoct the abstractions upon which this global financial system thrives (Graham 1999: 486) –it thrives on massive amounts of unproductive, ‘parasitic’ speculation (Kennedy 1998). Its most enthusiastic advocates are now attempting to impose this system upon the entire planet, and more disturbingly, upon its future (Miller Michalski and Stevens 1998: 26-32). This massive and parasitic system of speculation includes trade in the most abstract of commodities, such as ‘credit derivatives, call warrants, roubles, and baht’ (Graham 1999: 499). Currency speculation alone ‘generates at least 100 times the entire value of global trade in tangible goods’ (1999: 499). But financial “commodities” have no intrinsic use-value whatsoever. They generate “value” only as long as they are continuously exchanged.

Today, the “globalised” financial system of exchange values quite overtly mediates social perceptions of the relationships between space, time, power, and persons. So much so that it has become a commonplace to see nation states compared with particular individuals or corporations, based entirely on their comparative levels of “paper” wealth (cf. Barlow 1998; Friedman 1999; Walker 1999). In propagating such grossly distorted illusions, people’s perceptions, rather than concrete “things”, appear to be the primary objects of production in developed countries today. This trajectory is made possible by an advancing technological facility for people to commodify increasingly intimate aspects of social life, combined with the intrinsically human nature and functions of language and thought. I explain the convergence of technology and language more fully after outlining two other significant trajectories.
The formal and real subsumption of all material and intellectual labour

At the earliest stages of capitalist development, the labour process of systemic capital was mostly concerned with producing concrete commodities, cotton and linen for instance, with the emphasis of the commodity production system being upon physical aspects of labour power (Marx 1976: 1043). But industrialists quickly realised that the advantages of scale that the use of industrial technology (constant capital) offered were at the same time hampered by the amount of labour (variable capital) that increasingly massive amounts of machinery required (Marx 1976: 922-3: 1051-55). Consequently, systemic capital has tended to ‘increase constant capital at the expense of variable’ (1976: 1051). As a matter of course, then, ‘the acceleration of technological innovation is a corollary of the systematic application of science to production’ (Mandel 1975: 248).

The development and diffusion of technology within capital has tended towards an emphasis on its ability to firstly appropriate and commodify, and later to replace, increasingly intricate and intimate aspects of human labour power. Systemic capital firstly concerns itself with raw, “physical” labour power. Then, the division of labour engendered by the application of technology to production ‘gradually transforms the worker’s operations into more mechanical ones, so that at a certain point a mechanism can step in to take their place’ (Marx 1973: 703). Consequently, ‘[i]nvention becomes a business, and the application of science to direct production itself becomes a prospect which determines and solicits it’ (1973: 704).

Mandel (1975: 249) identifies the years between 1919-1939 as the period during which all ‘intellectual labour’ is subsumed under systemic capital (1975: 249-50). In the same period, management became ‘scientific management’ (Dixon 1996: 36). Einstein theoretically fused time and space. Ford began mass-producing motor cars. Electronic mass media - ‘the culture industry’ - became a world-shaping influence (Horkheimer & Adorno 1947/1998; Innis 1951: 188-9). The contemporary rhetoric surrounding the nascent radio and film industries has a recognisable tone today:

We want a radio that reaches the people, a radio that works for the people, a radio that is an intermediary between the government and the nation, a radio that also reaches across our borders to give the world a picture of our life and our work. … The purpose of radio is
to teach, entertain and support people, not to gradually harm the intellectual and cultural life of the nation. (Goebbels, 1933)

Thus, “the culture and intellectual life of the nation” suddenly found themselves within the purview of systemic capital’s immediate processes of production, even if only by spurious negation. By the time Horkheimer and Adorno (1947/1998) had completed their bleak appraisal of ‘the culture industry’, centralised electronic media had been deployed to incite and coordinate the most massive, immediate, and destructive exercise in propaganda the world had ever seen: World War II. Hitler, Roosevelt, and Churchill used the radio to equal effect. At the same time, research into public opinion, a ‘child of America in the 1930s’, turned knowledge about public opinion into the most valuable of all commodities (Hobsbawm 1994: 142-5; cf. also Innis 1951: 188). The point at which opinion becomes commodified is the point at which ‘thought inevitably becomes a commodity, and language the means of promoting that commodity’ (Horkheimer & Adorno 1944/1998: xi-xii).

Systemic capital has steadily increased its pervasiveness, and ‘free time’ has become more and more a ‘shadowy continuation of labour’, a complex space of economically productive ‘pseudo-activities’ (Adorno 1991: 168). In hypercapitalism, economically “productive” activities can now consume the entire waking life of people. A simple example of how this is achieved can be seen in the frenzied advertising clamour for corporate “space” in the minds of individuals. Advertising not only generates economic value in the process of its production, it ideally creates value in its consumption by producing a predisposition in people to purchase a specific brand, product, or service (Samarajiva 1996: 137). Advertising is an obvious example of how human thought is objectified, produced, and commodified, and it clearly reflects the dual nature of communication technologies as ‘both objects to be consumed and the facilitators, through their status as media, of consumption’ (Silverstone and Haddon 1996: 65). But because the theoretical separation of material and mental processes is patently false, it is quite legitimate to argue that ‘production regulates consumption in the process of mental life, just as it does in that of material life’ (Adorno 1991: 169).

And the theoretical division between material and intellectual labour is false (Schiller 1996: 20-1). I am neither attempting ‘to grapple with the theoretical status of intellectuals’ here (1996: 20), n. Nor am I attempting to abolish the distinction out of hand. But a none too
close inspection reveals that ‘the apparent leading difference between “intellectual” and “manual” work’ is that it serves to sustain ‘a spurious means of social distinction’ (Schiller 1996: 20-1). This has been the case throughout recorded history (Horkheimer & Adorno 1947/1998: 20; Marx 1846/1972: 130-43). Indeed, the apocryphal idea that labour of any kind could be conducted without intellectual engagement gives lie to the idea that labour can be divided neatly into “intellectual” and “manual” categories (Schiller 1996: 20; cf. also Weber 1930: 63) 2. Intellectual processes are material processes, and the ‘labour of representation’, whether by writing, speaking, painting, or whatever, is a material process of production that results in the materialisation of meaning (Bourdieu 1991: 164).

Hence I use the term “labour” in the broadest possible sense. That is, while Marx pays most attention to physical labour power, he sees that labour is ‘the entire productive activity of man [sic], through which his metabolic interchange with nature is mediated’ (Marx 1981: 954). This necessarily includes mental production and the production of language and social consciousness (Marx 1846/1972: 122-125). I use the term production, then, to refer to the entire network of activities by which societies produce and reproduce themselves as particular forms of social organisation. Production is, axiomatically, a socially necessary process because a ‘society can no more cease to produce than it can cease to consume. When viewed, therefore, as a connected whole … every social process of production is at the same time a process of reproduction’ (Marx 1976: 711). Thus I define the social production process as the entire network of activities and artefacts with which societies reproduce themselves from every perspective, and at every level: materially, socially, relationally, mentally, and economically. Such expansive, all-embracing conceptions of “labour” and “production” may seem far too broad to be of any use. Nevertheless, they merely reflect the trajectory of systemic capital as it extends its processes of commodification to include everything from ‘goods of the mind’ to the very ‘essence of life’ itself (Barlow 1998: 5-9).

2 ‘The ability of mental concentration, as well as the absolutely essential feeling of obligation to one’s job, are here most often combined with a strict economy which calculates the possibility of high earnings, and a cool self-control and frugality which enormously increase performance’ (Weber 1930: 63).
Production, consumption, circulation: Their analytical convergence

In a technologically mediated global economy, the largest sector of which produces abstract financial instruments designed to be continually exchanged but never “consumed”, questions about precisely what is being produced and consumed, and by whom, become quite difficult to answer. A knowledge economy implies that the production of particular mental predispositions has become a central focus for globalised productive processes. In a system with such a singular and abstract focus, production, consumption, and circulation become an inseparable whole, and “value creation” becomes an immediate, continuous process that unites the formerly separable spheres of production, consumption, and circulation (Barlow 1998).

Thus there can be no distinct analytical usefulness in separating these spheres within hypercapitalist political economy because the boundaries - conceptual, physical, and temporal - between them are dissolved by new media’s ubiquity; by the work habits engendered by new media; and by the mass, and more importantly, the immediacy of hypercapitalist exchanges. Although Marx treats these spheres as analytically separate (1976: 1019-49), and differentiates between ‘productive’ and ‘unproductive’ labour (1976: 1043-45), he sees that from one perspective it is possible that ‘the entire time of the worker is taken up by capital’ (1976: 1002-4). But he gives little credence to such a view, perhaps because of the preeminence of “material” commodities which were the main objects of the labour process at the time he wrote.

Marx defines the sphere of consumption as the sphere in which the ‘means of subsistence’ are consumed (1976: 1004). Since they disappear from circulation after being consumed, the means of subsistence ‘form no part of the physical elements in which capital manifests itself in the immediate process of production’ (1976: 1004). But today, trade in

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3 I owe the following insights to Peter Jones of Sheffield University who helpfully criticised an earlier draft of this paper.
means of subsistence, in tangible goods, constitutes a miniscule percentage of global exchanges (Graham 1998). Marx views the relationship between the spheres of production and consumption as being mediated in the sphere of circulation (exchange) because this is the sphere in which labour is purchased (1976: 302). However, this leads him to see that once exchange-value had ‘acquired a definite, independent, form, distinct, albeit ideally, from its use value’ (1976: 955), and when ‘all produce necessarily assumes the form of the commodity and hence all producers are necessarily commodity producers’, then ‘use-value is universally mediated by exchange-value’ (1976: 951). And this is what has happened: hypercapitalist production processes have commodified and industrialised almost every conceivable aspect of human social life, including life, birth, death, sex, and thought.

Once knowledge commodities are produced, they are not necessarily removed from circulation after they are exchanged and “consumed”. In the process of consuming informational products, the consumer’s reproductive process is oriented, not towards physical reconstitution, or subsistence, as is often the case with “material” consumption, but towards reproducing themselves in the ‘descriptive domain’ of human cognition, the domain in which self-identity is constituted (Graham 1999: 488; Graham and McKenna, in press; Maturana and Varela 1980 1987: 231). Thus the commodities of the information economy can be a source of self-identity ‘when and if social actors internalize them, and construct their meaning around this internalization’ (Castells 1997: 7; cf. also Silverstone and Haddon 1996: 62-5). But this is not a two-step process. The exchange and consumption of knowledge is immediate – knowledge is produced at the same time it circulates and is exchanged. Furthermore, knowledge exchanges immediately produce new knowledge, as well as forming the foundations for the production of even more knowledge. Thus production, circulation, and consumption become analytically inseparable.

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4 There is also the issue of the massive amounts of infrastructure being built at that time - railroads, telegraphs, the Panama Canal - all of which consumed enormous amounts of labour (Graham in press; Hobsbawm 1975: 40-65).

5 The bulk of exchanges today are speculative financial transactions. At a conservative estimate, they constitute more than 98 percent of global “trade”. Over one-third of the remainder, roughly 1.3 trillion dollars per year, is taken up in arms sales and so cannot be counted either as subsistence or “luxury” goods (Graham 1998 1999).
First synthesis: Value-alienation, knowledge, and valorised language

The three trends I have outlined above are exemplified in the popular notion of a “knowledge economy”, even if it only exists as a fanciful, imagined possible future, or as high-tech speculation on an unprecedented scale. Axiomatically, knowledge commodities - commodified forms of thought and language - are fundamental to the operation of a knowledge economy. As such, they highlight the centrality of language to human societies, and its immediacy in terms of exchange. That is because knowledge commodities are necessarily exchanged in one sort of language or another. To be of value, knowledge commodities need to be technologically stored, harnessed, exchanged, and circulated. Moreover, they need to be recognised as valuable and significant “things”. This is an historically recognisable function of new media. New media have played consistent roles throughout human history. They are the means by which specific groups of people have produced, maintained, manipulated, and eventually destroyed historically specific forms of “knowledge economies”, or rather ‘knowledge monopolies’ (Innis 1951: chapt 1).

Neither knowledge commodities, knowledge monopolies, nor the specialised groups of people who produce them, are new features of human society. Specialised language and thought have, to the best of historical knowledge, always been at the centre of social, political, economic, and technological developments within human societies (cf. Bourdieu 1991; Castells 1996: chapt 1; Hobsbawm, 1998; Innis 1950, 1951; Marx 1846/1972: 139). Historically, knowledge specialists have included priests, philosophers, technocrats, bureaucrats, scientists, scribes, and so on (cf. Bourdieu 1991; Fairclough 1992: 216; Innis 1951; Lemke 1995: 60-1; Martin 1998: 429).

What is new about hypercapitalism, what makes it different from past forms of social organisation, is that today’s new media facilitate the almost immediate production, consumption, distribution, and exchange of valued categories of thought and language -

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6 For the sake of convenience, I use the term language here in the broadest sense. I include computer languages, images, symbols, and sounds by which meaning may be exchanged. I recognise that a more formal definition of
knowledge commodities - on a planet-wide scale with a mass and immediacy that is historically unprecedented. Further, thought and language have themselves become the primary objects of production, distribution, and exchange within this emergent system (Graham 1999: 487). But that is merely to say that a knowledge economy must, self-evidently, be communicative in nature; its commodities must be the products of conscious distinctions between various aspects of human socio-material environments; and these distinctions, to be exchanged with any political or economic efficacy, must be exchanged in more and less valued forms of language, which are necessarily the products of more or less valued social relationships (cf. Bourdieu 1991; Gal 1989: 349-52; Graham 1999: 486-88; Schiller 1996: 21).

At the most fundamental level, knowledge production is a continuous process of ‘sociocognitive exchanges’ between people and their social and material environments (Graham 1999: 485-6). Knowledge is the production of new meaning, and any instance of meaning-making is ‘a sociological event, … through which the meanings that constitute the social system are exchanged’ (Halliday 1978: 139). Thus, the process of sociocognitive exchange, meaningful interaction itself, is at the same time a process of production and consumption which is implicated at the very heart of social relations: ‘[w]here human knowledge and political economy are concerned, language is both a means of production and exchange’ (Graham 1999: 483). Axiomatically, ‘production is simultaneously consumption’ and vice versa, and both production and consumption are necessarily material processes of exchange (Marx 1970: 195-6).

Consumption and production of knowledge commodities, then, are quite necessarily processes of destruction and reproduction. But unlike the more “concrete” commodity-forms that have dominated previous eras, the commodities of the knowledge economy are not destroyed once they are consumed, even if they are materially produced and consumed. One cannot destroy information merely by “consuming” it (fire, eternal monopoly, and digital disasters notwithstanding). Once “consumed”, though, a particular knowledge commodity language would separate these forms of communication into various categorical subsets (cf. Graham, 1999; Graham & McKenna in press).
ceases to be an immediately informing “substance” for a given person: its functional utility as knowledge is destroyed. However, once informed, people can then reproduce, reconfigure, and redistribute their knowledge in an infinitely complex cycle of social interactions and exchanges. “Consumers” of knowledge are simultaneously its producers. Language is its means of exchange.

A corollary to all this, considering the ‘division of intellectual labour’ (Jarvis 1998: 87-88) that knowledges of varying value entails, is that certain dialects are more readily commodified than others: valuable knowledge is necessarily the product of valorised language and vice versa. When seen as such, the intrinsically political nature of language (Lemke 1995) converges with its economic and fundamentally empirical aspects. Marx identified the nature of valorised dialects - knowledge commodities - more than 150 years ago:

The production of ideas, of conceptions, of consciousness, is at first directly interwoven with the material activity and the material intercourses of men [sic], the language of real life … The same applies to mental production as expressed in the language of politics, laws, morality, religion, metaphysics etc. of a people. Men are the producers of their conceptions, ideas, etc. … Consciousness can never be anything else than conscious existence, and the existence of men is their actual life-process. (Marx1846/1972: 118 emphasis added).

Here Marx identifies the inherently obfuscating nature of valorised dialects: they are fundamental to our way of knowing the world, to social consciousness itself. The socially significant status of the people who embody valorised dialects, practitioners of politics, law, and so on, causes them to appear as fetishised, objectified “things”. Thus their nature as “products” of specific social circumstances, and of the relations, assumptions, and ideological traditions, that pertain to these, often remain hidden.

At any given time in history, dominant interests give their ‘ideas the form of universality, and represent them as the only rational, universally valid ones’ (1847/1972: 138). Consequently, dominant ideas, which are necessarily embodied by specific individuals, appear as expertly objectified “things” within a system of self-valorising things. That is why the class which is the ruling material force of society, is at the same time its ruling intellectual force. The class which has the means of material production at its disposal, has control at the same time over the means of mental production, so that thereby, generally
speaking, the ideas of those who lack the means of mental production are subject to it (Marx 1846/1972: 136).

In this respect, any historically specific “knowledge economy” is essentially an ‘identity economy’ (Hearn and Rooney 1999). That is because knowledge of the world is identical to one’s understanding of the world, and, consequently, to understanding one’s self in relation to the epistemological universe of dominant ideas, in any given field of society. In hypercapitalism, ideas and their associated value system are circulated and propagated at the speed of light within the digital realm of new media. Systemic capital ‘by its nature drives beyond every spatial barrier. Thus the creation of the physical conditions of exchange - the annihilation of space by time - becomes an extraordinary necessity for it’ (Marx 1973: 524; cf. also Innis 1951: chapt. 1). In short, systemic capital becomes more “productive” as circulation time - the transformation of money into commodities and back again - decreases (Marx 1973: 524-549). Today, the dominant ideal is exchange value itself –hence the idealistic notion of a knowledge economy. A knowledge economy is the apotheosis of an exchange system which has become an end in itself.

Capital, labour, language, new media, and social consciousness

Phenomenological capital embodies labour which has finished its work, or, ‘dead labour’ (Marx 1976: 342). The purpose of systemic capital is to extract surplus value from the living labour it appropriates (1976: 302). Consequently, systemic capital ‘is a perpetual pumping machine for surplus labour’ (Marx 1981: 961), whereas phenomenological capital is ‘dead labour which, vampire-like, lives only by sucking living labour, and lives the more, the more labour it sucks’ (Marx 1976: 342). In a knowledge economy, products of the human mind become, simultaneously, the source of surplus-value, means of production, and object of production. As systemic capital progresses as a form of social organisation, it becomes increasingly technologised. A corollary to this is that

[t]he more thoroughly developed the means of production and its associated division of labour, the less living labour can set its own goals: the less, indeed, living labour is living. The shift in the proportion of constant and variable capital is extended into the proportion of living and dead elements in individuals (Jarvis 1998: 71).
This is not meant to be construed as some ‘pat phrase’ about the ‘mechanisation’ of people, as if they were ‘something static which, through an “influence” from outside … suffer certain deformations’ (Adorno 1951/1974: 229). It is, rather, the result of existing in social conditions in which people appear in language as “things”, as, for instance, in the ultimately objectifying terms ‘human capital’ and ‘labour market’ (e.g. Latham 1998: 46-7). It is only when the process ‘by which labour is first transformed into a commodity’ has thoroughly infused the consciousness of individuals, thus objectifying ‘each of their impulses as formally commensurable variations of the exchange relationship’, that social beings themselves are perceived as phenomenological capital: they become categorically objectified in language – they become categorically ‘dead’ (1951/1974: 229). Such objectifying processes are an intrinsic function of language (Halliday 1993: 10).

But “labour”, living or dead, is not a matter of its content or form. Rather, its definition as “labour” is a matter of its place within systemic capital’s epistemological universe. To exemplify this assertion, it is worth considering the way Marx distinguishes between unproductive labour - that which people do by their very nature, and which falls outside systemic capital’s sphere of appropriation - and productive labour, labour that can be appropriated by systemic capital in pursuit of surplus value. These distinctions extend to the production of knowledge, art, and what has become known as the “services sector” (1976: 1043-5):

A schoolmaster who instructs others is not a productive worker. But a schoolmaster who works for wages in an institution along with others, using his [sic] own labour to increase the money of the entrepreneur who owns the knowledge-mongering institution, is a productive worker. But for the most part, work of this sort of work has scarcely reached the stage of being subsumed even formally under capital, and belongs essentially to a transitional stage. (1976: 1044).

Here we see the implications of what a knowledge economy entails. The objects of systemic capital’s technology have changed. They have moved from being primarily an instrument for

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7 The ontologisms that have plagued the social sciences in recent times are mostly unhelpful for precisely this reason: they restrict themselves to merely describing what is (Adorno 1964/1973). Such approaches can offer no alternative to what exists.
the ‘domination of nature’ (Adorno 1991: 61), seen as “external” to human societies, to being more concerned with manipulating human nature itself, in particular, human consciousness. This begins with the commodification of human interaction, with the *products* of language, which are products of a particular kind.

Language, by its very nature, provides the means by which social and material reality is ordered for each individual. Language is also, unquestionably, a material and social product:

Language is not a superstructure on a base; it is a product of the *conscious* and the *material* impacting on each other – of the contradiction between our material being and our conscious being, as antithetic realms of experience. Hence language has the power to shape our consciousness; and it does so for each human child, by providing the theory that he or she uses to interpret and to manipulate their environment. (Halliday 1993: 8)

That is why ‘language *is* practical consciousness’ (Marx 1846/1972: 122) and why, quite literally, perception, language, meaning, consciousness, and consequently, knowledge and identity, have been progressively dragged into systemic capital and subsumed under its sphere of appropriation (Graham 1999: 488-9). If we are to understand the effects of new media, we must understand their relationship to, and impact upon language, because new media and language are converging in their social roles.

**Second synthesis: The functional convergence of language and new media**

Language, knowledge, power, and new media are historically inseparable. They emerge together as the very beginnings of recorded history itself:

When language enters history its masters are priests and sorcerers. Whoever harms the symbols is, in the name of the supernatural powers, subject to their earthly counterparts, whose representatives are the chosen organs of society. (Horkheimer & Adorno 1947/1998: 20)

Like the commodities that formed the basis of previous forms of systemic capital, knowledge commodities of are ‘self-valorizing’ (Marx 1976: 255): the more widely and quickly they are circulated, the more they appear to accrue value independently of the people who produce them. The difficulty in “seeing” knowledge commodities *as* commodities is that they become
manifest only as ephemeral “things”, as specific instances of ‘technologised’ meaning making (Fairclough 1992; Iedema 1999); or, as instantiations of ‘the labour of enunciation which is necessary to externalize the inwardness, to name the unnamed and to give the beginnings of objectification to pre-verbal and pre-reflexive dispositions’ (Bourdieu 1991: 129). Thus, knowledge commodities cannot really exist as discreet “things”. Rather, they are the continuous products of social interaction, the public expressions of thought, knowledge, power, and emotion. And as socially situated “things”, they have different values for different people (Bourdieu 1991 1998).

The ‘labour of representation’ is like any other form of labour: a socio-historically conditioned process, the value of which is also established through and within socially and historically conditioned contexts, through the institutionally contextualised processes by which ‘symbolic power’ is enacted, realised, and (mis)recognised as such (Bourdieu 1991: 164). Thus, the objective bearers of “authorised” knowledge become fetishised, valorised, and self-valorising the more their knowledge gains socially recognised authority.

Assuming as I do that “official” knowledge is power, the value system of a knowledge economy can be viewed as an overt expression of the power system specific to the society in which particular knowledge commodities are produced and exchanged. That is to say, in any given social situation, particular persons are endowed with the social significance of legitimate “expertise”. They are recognised as “expert” producers of knowledge (Bourdieu 1991: chapt. 4). This phenomenon is, literally, as old as history itself. An historical investigation shows that the trajectory of new media, and the socially validated knowledges associated with these, have interdependent characteristics and effects. Innis notes that ‘sudden extensions of communication [media] are reflected in cultural disturbances’ (Innis 1951: 31). For instance, in France prior to Gutenberg’s press, ‘[m]onopolies of knowledge controlled by monasteries were followed by monopolies of knowledge controlled by copyist guilds in the large cities’, the results of which included ‘the growth of trade and of cities, the rise of vernaculars, … the increasing importance of lawyers, [and] the concept of space in nationalism’ (1951: 53). The historical effects of Gutenberg’s press itself are well evidenced in the rapid decline of centralised power in the Roman Catholic church, and in the eventual demise of European monarchies (Graham in press).
Each new medium throughout history has had quite specific ‘implications for the character of knowledge’ throughout its dominance (Innis 1951: 3-4). The result has been that ‘a monopoly or an oligopoly of knowledge’, and therefore power, has formed around the specific institutions that have regulated access to new media, and to the most valued, sacrosanct forms of knowledge specific to these (1951: 3-4):

The imposition of a sharp divide between sacred and profane knowledge, which underlies the claims of all groups of specialists seeking to secure a monopoly of knowledge or sacred practice by constituting others as profane, thus takes on an original form: it is omnipresent, dividing each word against itself, as it were, by making it signify that it does not signify what it appears to signify, by inscribing within it … the distance which separates the ‘authentic’ from the ‘vulgar’ or ‘naïve’ sense. (Bourdieu 1991: 145)

Consequently, at the very time knowledge commodities become “visible”, their social character, their status within the hierarchy of “authentic” knowledge, along with their immediacy as forms of technologised language, renders the social source of their status as valuable commodities invisible. Indeed, they may not appear as artefacts of knowledge, but as reified artefacts of socially sanctioned power: as specific people. At the same time, the value system associated with specific forms of knowledge becomes reified, abstract, and increasingly alienated from its source, precisely because the value attributed to knowledge of particular kinds appears to be “attached” to particular people, embodied by them as it were. As Bourdieu notes, ‘the profit of distinction, procured by any use of the legitimate language, derives from the totality of the social universe and the relations of domination that give structure to it’ (1991: 73). But the very fact that socially significant power is embodied by particular “legitimised” people gives rise to the illusion that symbolic profit ‘appears to be based on the qualities of the person alone’ (1991: 73). This hides the institutionalised nature and generative logic of symbolic power (1991: 73).

The paradoxical fetishisms that cleave to persons who have a recognisable and institutionally legitimised mastery of valorised dialects, along with the social sanction of the “sacred” institutions within which these knowledges are produced, is also a cumulative function of technologised language. Historically, language has tended towards “thinginess”, towards objectification (Halliday 1993). In the first instance, the historical ‘shift into the written medium’ transformed embodied discourses into static “things”, ‘and the abstractions -
the written symbols and their arrangements - are transformations of processes into things’ (Halliday 1993: 10).

Written language, the first materially enduring communication technology (Innis 1951: 33), transforms ‘processes into things [which are then] construed as commodities; they take on value, and can be drawn up and itemized into lists’ (Halliday 1993: 10). Here we see the role that technology plays in alienating value from its source: by separating thought from its embodied thinker, writing forms the generative and organising principle of the physical alienation - the literal objectification - of language, thought, and value. Writing is the historical source of the seamless trajectory that propagates objectified forms of thought. A direct consequence of this is the illusion that

we live existing in our language as if language were a symbolic system for referring to entities of different kinds that exist independently from what we do, and we treat even ourselves as if we existed outside language as independent entities that use language (Maturana 1995).

Similarly, our symbolic system of economic values - money - now appears as something external to us. It appears as an objective system which expands its power independently of what we do. That is because, like language, ‘money is an ideal measure, which has no limits other than those of the imagination’ (Marx 1973: 190). The money system, like language, arises

from the mutual influence of conscious individuals on one another, but [it is] neither located in their consciousness, nor subsumed under them as a whole. Their own collisions with one another produce an alien social power standing above them, [and] produce their mutual interaction as a process and power independent of them. (1973: 196-7)

These historically entrenched contradictions, which are also inherent in technologised forms of language and thought, have never been so exposed as in the presence of a putative knowledge economy. It is a system in which technologised forms of thought and language, value and money, appear as independent forces of nature itself. This, too, is a function of human history.
The historical industrialisation of language and its relation to other industries

What is often ignored in accounts of systemic capital’s development is that its herald was the first mechanically mass-produced products: books and pamphlets (Innis 1951: 139). In other words, the industrial revolution and the emergence of systemic capital as a recognisable form of social relations followed the “information revolution” that Gutenberg sparked almost 350 years before the industrial revolution was fully realised (Graham in press; cf. also Weber 1930/1992: 44-5). After millenia of technologisation, objective technologies and technologised language have converged to the point at which

[language is no longer just a mode of social control; it is also the [direct] mode of control over physical systems and processes.

The immediate impact here is the technologising of language itself. Here we have a direct line of evolution from the printing press to the computer, via the telephone, typewriter and tape recorder. (Halliday 1993: 68)

I would add to this Innis’s (1950 1951) insights that show an historical tapestry - historical overlays of ICTs, one on top of the other - from oral traditions and writing, to the original mixing of these in ancient Greece, to the first electronic media. Of course, we must include boats, trains, the telegraph, radio, and television – anything that has affected modes of social communication, organisation, and control, especially means and modes of communication distribution (Innis 1950 1951; Marx 1973: 524). Today’s new media conflate the processes of production, exchange, and distribution of self-valorising language and thought within a massive, quasi-spatial domain of globally interconnected “things”, and they do so at the speed of light. Alongside this self valorising system of knowledge commodities is its arbiter, partner, and facilitator – the system of symbolic values that constitute the globalised system of monetary exchange.

A history of ICTs is also a history of knowledge monopolies being built and destroyed. Corresponding to this history is a history of social controls and subsequent revolutions against these. In short, the history of ICTs is a history of the most fundamental and violent changes in social relations (Innis 1951: 31-2). It is also a history of how people preserve and exchange language, knowledge, and power at temporal and spatial distances. Each major historical advance in ICTs has corresponded to identifiable social ruptures as new ways of
“technologising”, exchanging, and thus propagating knowledge - sacred and profane - become available to specific groups of people (Innis 1950 1951).

Languages, technologies, and societies, and the people who create, constitute, inhabit, and deploy these, each mediate changes in the others’ circumstances of production and reproduction. This necessarily includes the production and reproduction of conscious experience, an inalienably material process. Conscious experience, in turn, shapes, and is shaped by, other socio-materically embedded actions (Halliday 1993; Marx, 1846/1972: 123-4). Historical changes in the interdependent factors that comprise society bear the marks of the historical conditions within which they become manifest. Language is no exception:

[T]he particular mix that characterises the elaborated tertiary styles of the Eurasian world languages, from Japanese and Chinese at one end of the continent to English, French and Spanish at the other, is the result of layering, one on top of another, of all these various “moments” in their history through which experience has been ongoingly reconstrued in successively more abstract and objectified terms. (Halliday 1993: 11)

Technological advances, of all kinds, can also be seen to be “layered” upon preceding innovations. For instance,

[e]lectricity was the central force of the second [industrial] revolution, in spite of other extraordinary developments in chemicals, steel, the internal combustion engine, telegraphy and telephony. This is because only through electrical generation and distribution were all the other fields able to develop their applications and be connected to each other. (Castells 1996: 38-9)

This historical overlaying of techniques or “modes” of expression, and their integration with objective technologies, forms a retrospectively perceptible pattern. But this implies neither a linear nor deterministic view of technological development: ‘the pattern is a helical one … .Mixed modes engender mixed genres’ (Halliday 1993: 68). In the ‘field of power’8 (Bourdieu 1998: 34), these ‘mixed genres’ are historical manifestations of technologically reconciled social antagonisms and power struggles that have been acted out within and between specific

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8 The field of power (which should not be confused with the political field) is not a field like the others. It is the space of relations of force between the different kinds of capital or, more precisely, between the agents who
social domains throughout history: the mixed genres to which Halliday refers are the result of historical overlays of technologised meaning, objectified and technologically reconciled forms of social antagonism, one upon the other (cf. Fairclough 1992: 158; Iedema 1999; Innis 1950 1951).

The abstract convergence of technology, language, and specialised thought has quite specific and concrete implications. According to Coates (1998), within the next twenty-five years in ‘World 1’, ‘[n]o aspect of the human being, whether physical, mental, intellectual, social, psychological or physiological, will be beyond practical manipulation and change, all of which will be made possible and practical through technology’ (1998: 41)⁹. Coates assumes that, by this time, knowledge about people will converge with the technological means to apply that knowledge. As a result,

[b]rain technologies will go well beyond disease, offering relief for the person who is short-tempered the person who has no sense of humour, the person who is overly emotional. And relief from these conditions will find a substantial market. Beyond that will be the possibility and later the practice of enhancing people's cognitive processes, enabling them to think more clearly, to have a better command of arithmetic, to have a better memory for faces, to be more generous and loving, or to be less prideful or slothful. (1998: 42)

An historical heteroglot of privileged social voices is evident in this statement by Coates: we hear the fluent voice of the economically minded technocrat (technological relief from these conditions will find a market); priestly pronouncements and predictions upon at least five of the “seven deadly sins” (by my estimation he has covered pride, sloth, envy, anger, greed, and implicitly, lust); the condescending and banal platitudes of patriarchy prescribing what are, and will be, considered as “valuable” qualities for a person to have (a better command of arithmetic; a better memory for faces, etc). In short, Coates’s statement collapses millenia of technologised thought, and the power and value systems which inhere in these.

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⁹ “World 1” is what the Organisation for Economic Cooperation and Development (OECD) calls the wealthiest sectors of the world’s wealthiest countries (Coates 1998: 34)
Such is the legacy of a literate society. Meaning can be ‘made manifest and progressively “technologised”’ (Iedema 1999: 1). In being technologised, meaning moves from ‘temporal kinds of meaning making, such as talk and gesture, towards increasingly durable kinds of meaning making such as printed reports, designs, and buildings’ (1999: 1). Each step away from embodied and ephemeral meaning making that the technologising process takes manifests itself in a less negotiable, more ‘technologised’ form: a report is less negotiable than a meeting; an architectural design is more negotiable than a building, and so on (Iedema 1999). Similarly, casual conjecture is far more negotiable than the “facts” of technologised orthodoxy. By the same systemic logic, not all ways of knowing share similar importance. The logic of a system historically based on more and less valuable and valid knowledges presupposes an intrinsic assumption of inequality between social contexts of knowledge production, and so between individual persons: it presupposes an economy of access to privileged knowledge. Herein lies the challenge for critical research into new media: creating egalitarian access, not merely to knowledge, but also to privilege. Paradoxically, egalitarian access to privilege immediately abolishes privilege as a category.

Today, systemic capital’s contradictions are exemplified in the post-Fordist maxim: ‘I think therefore I produce’ (Castells 1998: 359). Here, in the knowledge worker’s ontological motto, Castells highlights the paradox of hypercapitalism’s knowledge economy: it would seem that anyone with the capacity for thought and language, and with access to the technological means of production, would instantly qualify as a potentially “valuable” producer of knowledge. This is clearly not the case. Thus hypercapitalism offers an opportunity to view some of the most fundamental contradictions inherent in the logic of sytemic capital’s social relations –the basic, seemingly objective, seemingly immutable inequality of people. In addressing this issue from an historical materialist perspective, I must reassert that, although they are apparently ephemeral, thought and language, and more importantly, the perceived value of their socially situated context of production, are as much a material product and a producer of specific material social relationships as are golf balls or mass-produced motor cars (Adorno 1991: 99; Bourdieu 1991; Gal 1989: 352; Graham 1999: 483; Marx1846/1972: 123-4).
Third synthesis: History, language, new media, and society

Language defines social realities, and it defines the value systems which shape the way we live. New media have specific and profound effects that are never quite recognisable, before, during, or perhaps even after their mass diffusion and deployment. Relations and modes of production are delineated and defined in people’s language, and that is why language provides an important, if not a vital focus for research into the effects of new media. But that is no simple matter. Language practices cannot be understood outside of their historical contexts; but neither can they be derived from these contexts by any simple relation … language is at the same time a part of reality, a shaper of reality, and a metaphor for reality. (Halliday 1993: 8)

Technologised language is like any other historically significant human achievement. It contains traces of its past within its present which, in turn, contains the seeds of all possible futures within in its present form. It contains the sediments of history within its formal and informal instantiations. It delineates myriad aspects of the world from each other, and gives social life to thought across generations and across continents. The material artefacts of language - for example, recorded speech, the written word, video recordings, and so on - appear as technologised forms of thought, alienated artefacts of social interaction which, once alienated from the thinker, appear as objectified, historical resources of varying value for making more socially significant meaning. In this respect, technologised language can be viewed as intrinsic to both systemic and phenomenological capital; as means of production and reproduction; as arbiter of distribution and exchange; and as product and producer of social relations – all at the same time. When viewed as such, technologised language becomes technologised symbolic capital; valorised artefacts of privileged social interaction.

The point at which language, thought, and technology converge in their mass and immediacy, at the same time being collectively deployed in controlling technological, physical, and social systems, is also the point at which knowledge about these systems...
becomes the most valuable knowledge of all. In such conditions, an individual’s mind takes on the qualities of the commodity-fetish. It simultaneously appears as an in-itself value and as an artefact which can be construed as if it were external to the person who “uses” it:

If some nerdy kid can go from zero to being worth 45 billion dollars in 25 years on nothing but the power of his mind — defeating the most powerful corporation of his time and now actually competing with whole nation states for control of the future — it is obvious that scale and economic momentum have lost a lot of their formerly fearsome credibility. (Barlow 1998: 12)

Here, the hegemony of the currently dominant neoliberal, neoeugenic logic becomes manifest as Barlow renders the nation-state and individual as commensurable “things” - conceptually fungible with each other - based entirely on the logic of an illusory, seemingly alien value system. The reified, apparently autonomous system of money takes on a distorting and determining role for Barlow. He renders nation-state and moneyed individual as qualitatively identical, based solely on accumulated amounts of symbolic, imaginary wealth.

Barlow’s display of circular, aggressive logic is a recognisable feature of today’s techno-globalist language (Graham 1998 1999). Barlow refers to economic power on an historically unequalled scale, wielded by a single individual, Bill Gates, to show that where nation-states are concerned, ‘scale and economic momentum’ have lost their ability to ‘control’ the future! But if anyone were naïve enough to believe that Gates rose to “power” single-handedly, by deploying “nothing but the power of his mind”, then some commentary from Friedman (1999) might help to illuminate an important aspect of the social context within which Gates has achieved his success:

The hidden hand of the market will never work without a hidden fist – McDonald’s cannot flourish without McDonnel Douglas, the builder of the F-15. And the hidden fist that keeps the world safe for Silicon Valley’s technologies is called the United States Army, Air Force, Navy and Marine Corps. “Good ideas and technologies need a strong power that promotes those ideas by example and protects those ideas by winning on the battlefield,” says the foreign policy historian Robert Kagan. (Friedman 1999: 84)

Perhaps this is why it seems so strange to people when they hear their own voice on tape for the first time. Such a widespread, unsettling phenomenon cannot be passed off as surprise at hearing a “new” voice for the first time. It is the shock of the most intimate alienation.
Knowledge, power, value, and language are, as ever, interdependent, mutually conditioning “things” in the knowledge economy – in a very literal sense. Dialects of power provide ‘access to material resources’ and are, unquestionably, materially produced, socially embedded practices (Gal 1989: 352). In being produced and exchanged, the products of valorised dialects - like the material products of industrialised society - produce and reproduce specific, though not immutable, social relationships (Fairclough 1989 1992; Graham 1999; Lemke 1995: chapt. 4). In short, knowledge commodities - because of symbolic weight attributed to their contexts of production - have a fully fungible relationship with the language by which they are exchanged. More visibly, they have a fungible relationship with money – the illusory and mysterious system of exchange value which can apparently render relationships between all “things” - even the nation state and the individual - rational and equivalent (cf. Horkheimer & Adorno, 1947/1998, pp. 10-17). As ever, ‘[l]anguage makes power; power gets valued’ (Martin 1998: 429).

Conclusions

Those who wish for egalitarian change and assume that it is inherent in new media may be sorely disappointed. The possibility for egalitarian change lies in our ability to promote a groundshift in perceptions about what we are and do, collectively and individually, as social, languaging, conscious people. Language is a material social practice with real, material effects. Currently, the system of money is being enthroned at the expense of perceptions about what human societies are. Language is also a commodity and a technology, or at least it has become increasingly commodified and technologised within the realms of new and “old” media. I have argued here for a focus on language in research into the social effects of new media precisely because this would appear to be the only way to assess changing perceptions and social relations in respect of our increasingly mediated social environments. These perceptions are conditioned by the way we talk about and deploy new media, and by the way language and new media appear to be converging in their social roles.

I have also outlined some of the contradictions and hidden trajectories inherent in hypercapitalism. What becomes apparent is that systemic capital’s valorisation process operates in a processual manner within and upon human relationships. This is not a new
finding, but it is one that has been increasingly ignored in recent times. Historical materialism is analytically based in the specificity of existing material conditions. Such a method, in the face of hypercapitalism and its knowledge economy, needs to eschew, reinvent, or further refine theoretical distinctions within political economy. Terms such as material and non-material production; productive and unproductive labour; production and consumption; forces and relations of production; base and superstructure; social capital; and, perhaps even politics, society, and economy, have all been useful theoretical and analytical distinctions in earlier historical materialist studies of political economy.

But now they may need to be redefined or dispensed with altogether. Because of hypercapitalism’s immediacy, which is a function of its pervasiveness, its circulation speed, and its ephemeral commodity-forms, such distinctions appear to be more obfuscatory than explanatory. Under conditions of hypercapitalism, forces and relations of production; base and superstructure; the valorisation process; material and non-material production; and production and consumption are ultimately entangled in each other because of the immediacy and pervasiveness of the social and technical domains within which they operate, and because of their intimate involvement with language and thought.

While Marx noted that the means of communication were intrinsic to circulation time, and therefore to the valorisation process, he largely ignores communication technologies in his overarching assumption that material commodities would remain of primary importance in creating value. This may yet prove to be the case. But under hypercapitalism, the illusion of value has taken on a grossly distorting role, even, or perhaps especially, where utility is concerned. The role of value has become inverted, and social utility now appears to be mediated by a mute, brutal, and illusory value system which is increasingly alienated from its source. Value is mediated, legitimised, and defined in language. It is used to appropriate and commodify increasingly intimate aspects of humanity. Thus, to engage hypercapitalism as the object of effective critique requires careful consideration of the fact that human perception has become capital’s primary object of production. Paradoxically, to engage hypercapitalism’s contradictions, critical inquiry into new media, like systemic capital itself, must focus on social relationships rather than objective “things”. In doing so, it constantly risks subverting its own intention and thus can never be finished.
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