



'Immeasurability': A critique of Hardt and Negri*

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abstract

The paper offers a practical criticism of Hardt and Negri's *Empire*, focusing on the concept of 'immeasurability'. It analyses key sections of the book and related passages from Negri's other works, illustrating their vagueness and inconsistency. Their relationship to Marx's theory of value is analyzed and the robustness of their arguments contrasted. A further section contrasts the constructs used by Hardt and Negri with developments in management theory and organizational economics and assesses their real world practicality. The paper concludes that the immeasurability concept fails to undermine value theory and is itself valueless.

Since its publication in 2000, Hardt and Negri's *Empire* has been the subject of controversy and intense debate (Balakrishnan, 2003) and attracted sustained criticism from a diverse range of commentators. The book's empirical claims, which include inter alia, that with globalization comes the end of the nation state, US hegemony and that what proletarian internationalism fought for has come about despite its defeat. (Hardt and Negri, 2000: 50), have been criticized for their evident implausibility (Brennan, 2003). Similarly the claim which has been advanced by others (Drucker, 1993, Reich 1992), and upon which Hardt and Negri (2000: 289-294, Hardt and Negri 2004: 113) depend for their sociology of immaterial labour, that industrial organization has passed from 'Fordism' to 'post-Fordism' is empirically contestable (Callinicos, 1990: 136-137). Many of the book's conceptualizations are equally disputable, but less easily refutable with reference to evidence, and, in claiming to reinterpret Marx, represent a potentially more serious challenge to radical thought.

Unsurprisingly, this has given rise to a large literature. Even so, subsequent debates have given little attention to socio-economic conceptual claims, particularly the nature and apparent importance of 'immaterial labour' (Camfield, 2007). Less attention has been given to value theory (for exceptions, see Caffentzis, 2005a, 2005b; Cleaver, 2005; Harvie, 2005; De Angelis, 2005; De Angelis and Harvie, 2006; Dowling, 2007), which, with its origins in classical economics and its radical implications confirmed in 'Second

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International Marxism', [Hardt and Negri counter-pose Second International Marxism and its mechanistic legacies, economism, positivism, and evolutionism with council communism, post Fordism and Deleuze and Guattari (Brennan, 2003: 107)] has accordingly been defined out of existence by the notion of 'immeasurability'. Such an argument is developed on the basis of Negri's assertion that Marx's *Capital* is a flawed work serving "to reduce critique to economic theory (and annihilating) subjectivity in objectivity" (1989: 19).

The concept of "value beyond measure" (Hardt and Negri, 2000: 355), or 'immeasurability', therefore issues a powerful challenge to radical thought, classical value theory as well as to the practicalities of accounting and management. On the one hand, according to this view, immeasurability has arisen because labour has become 'immaterial', that is, better qualified, more individually and collectively complex. On the other, capital becomes more financially orientated and more abstract in its mediation of diverse sectors of the economic cycle (Negri, 1999: 78). Bryan and Rafferty (2006: 66) draw the opposite conclusion, suggesting that the emergence of derivatives facilitates "the commensuration of values across time and space". The immeasurability thesis constitutes an explicit rejection of classical value theory and with it a rejection of the possibility of the creation of an accounting system based on non-psychological valuation criteria.

In response, this paper develops a critique of Hardt and Negri's notion of 'immeasurability', examining it as a logical concept. The approach adopted is the 'practical criticism' of IA Richards (Richards, 1924), which uses 'close reading' and the deliberate removal of context, so that the critique concentrates on the inter-relation of meaning in the text under consideration in itself. Extensive literature review, which readers can get from other sources, is therefore not the purpose and it has been minimized in order to explore the detailed arguments presented on the subject of value in *Empire*, with references to the prior literature only where Hardt and Negri themselves use as substitutes for necessary parts of their argument. For example the notion of power to act (Hardt and Negri, 2000: 356) is explained in more detail in Negri (1999). Nor is the purpose of the paper to question the wider claims of autonomist Marxism beyond the notion of value as measurement in labour process and market exchange, itself the subject of previous debate (c/f Negri, 1989 and Cleaver, 2005 {Cleaver (2005) was first published in 1989, thereby predating the debates on *Empire*}), for example value as belief or experience (Graeber, 2001) or as part of a measurement discourse (DeAngelis, 2005). Rather, because Hardt and Negri utilize and develop Marx's method, suggesting for instance that *Empire* allows for the first time the analysis of the state and the world market using Marx's approach (2000: 236-237). Marx's original works are used in the paper to test consistency and the logic of suggested differences.

The paper is structured as follows. The first section offers a practical critique of Hardt and Negri's concepts of immeasurability and immaterial labour concentrating on certain key passages of their work and illustrating their theoretical and empirical inconsistencies. A second section examines how Hardt and Negri's concepts perform in the real world context, assessing their performance relative to existing management theory. A final section draws conclusions, including an assessment of what if anything

can be salvaged from the concepts of immeasurability and immaterial labour that might be helpful in constructing a workable theory of value for the age of global capital.

Immeasurability: a practical critique

Hardt and Negri reject classical value theory using reasoning consistent with Negri (1997 [2003]), which argues for a redefinition of productive time. Negri (1997 [2003]) develops two concepts of time, co-operative, productive proletarian time and capitalist analytical command. In the first case there is time as substance, which is irreducible to elementary temporal units, so that there is now self-valorization, which is a form of re-appropriation based on the separation of co-operative labour from capital. In the second case there is time-as-measure, or quantities of labour time.

In *Empire* the co-operative essence of productive labour is generalized a stage further. Hardt and Negri's new political theory of value incorporates inter alia the Foucaultian notion of biopolitics, according to which power extends into the consciousness and bodies of the population and at the same time across the entirety of social relations (Hardt and Negri, 2000: 29). Hardt and Negri (2000: 28) use Deleuze and Guattari's post-structuralist development of biopower as the productivity of social reproduction (creative production, production of values, social relations, affects, becomings). As biopower achieves command over the entire life of the population only when it becomes a vital function that every individual embraces and reactivates of their own accord, it follows that for Hardt and Negri, value is determined only by humanity's own continuous innovation and creation and, as such, labour is productive activity outside measure (Hardt and Negri, 2000: 23-24, 356). Hardt and Negri (2000: 356) go on to assert that the excess of value is determined today in the affects, in the bodies crisscrossed by knowledge, in intelligence and in the sheer 'power to act'. The 'power to act' is Negri's (1999: 79) definition of affected labour.

The implicit non-sequitur is the first of several definitional and conceptual problems. If the first premise, of labour as an activity which is 'beyond measure', is accepted, it does not follow in the subsequent statement also that 'value can be determined', since determination implies measure and 'excess of value' implies measurement against some normal level. It is possible that by 'excess', Hardt and Negri mean profit, but their explicit rejection of the labour theory of value leaves them also without a theory of surplus value or profit. So Hardt and Negri cannot, for example, provide any explanation of why the average rate of profit is positive (Caffentzis, 2005a: 104). One might add that without a theory of profit creation, there can also be no theory of profit distribution. Without a theory of profit, there can be no theory of rent, nor a theory of price or market competition. Of course, immeasurability implies that all these theories are now surplus to the requirements of a value theory that only requires us to acknowledge there is a power to act and with it comes an associated excess or social surplus.

If this argument is accepted the result is merely tautology. The implication is that all actions, because subjective, immeasurable and biopolitical, are also creative and that all actions are by definition value creating. Destructive acts such as graffiti spraying, which

might be subjectively classified as art, are value generating activities according to this theory. The difficulty is that the theory does not recognize the ontological distinction between labour and action (Caffentzis, 2005a: 97), nor does it recognize the symbiosis between individual and collective power to act and over-arching power as suggested by Holloway (2002). A further problem is that there is no distinction between labour that is performed efficiently and inefficiently. Power to act implies power to work at one's own pace. If it takes creative workers in one firm twice as long to produce an output as it does the workers in another, it does not follow that the less efficient workers have produced more value, notwithstanding their greater power to act. Whilst Hardt and Negri retain the notion of socially created value, they reject the notion that there is some amount of labour that is socially necessary for that value to be created.

Much of Hardt and Negri's objection to socially necessary labour depends on an argument put by Negri (1997 [2003]: 28-29) which is worthy of detailed examination. Although the discussion here focuses on only two works (Negri, 1997 [2003] and Hardt and Negri, 2000) the arguments discussed are of a much longer vintage dating back to Negri (1978), and reflect the culmination of Negri's ideas. The conclusion reached by Negri (2003) is also a precise statement of the immeasurability hypothesis: "When the entire time of life has become the time of production, who measures whom" (1997 [2003]: 29)? Formulated in these terms 'immeasurability' means that as far as Negri is concerned, Marx's value theory needs to be "put out to pasture" (*ibid.*). At least Negri applies this conclusion to the parts of Marx's theory where there are possible aporias. Most fundamentally Negri's aporia arises because the quantity of simple necessary labour is established, citing Marx (1990: 135), "by a social process that goes on behind the backs of the producers" (Negri, [1997] 2003: 24). For Negri, 'behind the backs' means by a process external to production, which in turn means externally and immediately determined exchange values founded on the temporal quantities of use value.

An unresolved enigma, or aporia, as far as Negri is concerned is the problem of reducing heterogeneous complex labour to its simple equivalent. If aporia is taken as an implicit criticism of Marx, it is unwarranted since Marx makes it clear in Volumes 1 and 2 of *Capital* Marx that exchange values of commodities equal the 'socially necessary labour' time currently necessary to produce them, leaving Volume 3 to explain capitalist production as a whole. The reduction of complex labour to simple labour depends therefore on simplifying assumptions which Marx used for the purpose of developing his analysis, as the final sentence in the paragraph and a footnote adjacent to the above citation make clear (Marx, 1990: 135, n.15). Marx's footnote states: "the reader should note that we are not speaking here of the wages or the value the worker receives for...a day's labour, but of the value of the commodity in which his day of labour is objectified" (Marx, 1990: 135).

Even so Marx's analysis still faces the challenge either as posed by Negri or of the problems that occur once his own limiting assumptions are removed. These alternatives amount to the same thing and are overcome if there is a method of transforming values to price consistent with a general rate of profit. In effect, Negri appears to have rediscovered the old chestnut of orthodox Marxism, 'the transformation problem' by the back door of Spinoza's *Ethics*. Hardt and Negri (2000: 65-66) use Spinoza to elaborate

their 'power to act' doctrine (manifested here as the subjectivity of the labour process) by the multitude's ability to utilize society's pre-existing resources for its own ends. His formulation of the tautology in terms of externally determined proportions of value consistent with the temporal split of s/v , is paralleled in the transformation problem by the need to form prices at levels consistent with the underlying value and an equalizable rate of profit. The consequences of removing the price = value assumption in particular is well known in the unresolved debate on the transformation problem (Steedman, 1981, Desai, 2002). Subsequent attempts to resolve the transformation problem in a fashion consistent with Marx's formulation have achieved some success (Foley, 1982; Dumenil, 1983; Bryer, 2007), in the sense that the fundamental tautology suggested by Marx's critics and reformulated in the above aporia by Negri, is replaced by less fundamentally damaging assumptions to the traditional labour theory of value.

Even if these developments are ignored, as by Negri, the transformation problem is not the tautology that Negri's aporia suggests. In Volume 3 of *Capital*, Marx considers the problem of the equalization of profit and price formation in terms of a clear sequence of events, "The rate of profit arises from the temporal and quantitative s/v relation, in which capitals of equal magnitude put into motion different quantities of surplus labour" (Marx, 1984: 158) and its transformation into the general rate of profit through the process of competition, "Prices are then set for individual capitals at cost plus the general rate of profit" (Marx 1984: 156-158). Of course, these prices are of no use for the purposes of resolving the quantitative temporal s/v relation, whether individual profits are transformed to the general equilibrium or not. The point is that Marx's certainty and causality are substituted for aporia and tautology by Negri. For Marx, the temporal s/v question is resolved by the measurement of the socially necessary labour time, for Negri, all is displaced into the time of the subsumed being.

Even if the limitations on Marx's analysis imposed by the transformation problem are factored in, even as posed by Marx's strongest critics, they are not sufficient conditions for the conclusion that all is immeasurable and that value theory be abandoned. It is perfectly straightforward for example to transform heterogeneous labour with differential real wages into the rate of profit without reduction to simple labour (Steedman, 1981: 88-94). Like Hardt and Negri, Steedman and the Neo-Sraffans abandon value theory as the corollary of such transformations. Even so it is possible for example to measure the profit for an individual capital, retaining the labour theory of value, but without imposing the condition that the rate at which it is earned should be equal to the rate earned on all other capitals.

To deal effectively with the problem of valuing creative labour requires not just a definition of value consistent with socially necessary labour, but also a theory of rent. As socially necessary labour is necessary to valorize labour of differing efficiency consistently, a theory of rent is necessary to explain differing returns on investments of equal capital or why labour of similar skill and intensity might command vastly different remuneration. At this stage, it is useful to return to Negri's question who measures whom? An employee has the ability to measure the intensity of their own application to the production process and thereby the creation of physical or mental use values. Such self measurement, whilst dependent upon individual perception, approaches an objective understanding of value. At the same time, the greater the

degree of skill, associated with either tacit or specialist knowledge, the greater the potential measurement problem from the perspective of the employer. Imperfections in these monitoring arrangements create the possibility of labour rent earning capacity in complex, imperfectly monitored and therefore from capital's viewpoint, stochastic labour processes that embed tacit knowledge (Toms, 2005).

The normal response to these difficulties is the imposition of output controls based on financial or quantifiable targets as the quid pro quo of the abandonment of supervision and direct monitoring. Although these forms of measure seem arbitrary, they are made effective by the requirement of invested capital to earn rates of profit commensurate with socially necessary labour that maintains and accumulates capital utilizing the relations of law, governance and ultimately force, available to the employing organization. As the motive force of capital, the rate of accumulation assumes a collective objectivity as the required rate of return for stock market investors. The remoteness of investors from the productive process renders such rates of profit entirely arbitrary when applied to individual circumstances of value creation. Between the objectivity of the value creation process at the individual level and the imposed collective objectivity of required rates of return and accumulation, are the subjective interactions of accounting and accountability, between the measurer and the measured, in which knowledge is hidden as often as reported and effort disguised as much as recognized.

For Negri, the existence of co-operative labour compounds the problem of measurement and reinforces the conclusion of immeasurability. Again he draws on Marx as his immediate authority referring to Marx's description of the role of managers, engineers, technologists etc as socially combined labour (Marx, 1990: 1039-1040, cited in Negri, 2003: 28-29). Without contextualizing the quotation or commenting on it, Negri then suggests that "the concept of the socially combined worker represents the subsumption of the social whole by capital..." (Negri, 2003: 29, Hardt and Negri, 2000: 365). Negri then assumes that "social labour covers all the time of life" and then the conclusion referred to above "when the time of life has become the time of production, who measures whom" (*ibid.*).

Here we have three non-sequiturs joining the four citations together. The first of these is again particularly unfair to Marx. In describing managers and others as socially combined labour, Marx shows that in circumstances where their co-operative activity leads to the reproduction of variable capital, they can be considered to be productive labour. Marx's definition (in the section not cited by Negri, 1990: 1041) explicitly classifies certain types of wage labour and certain services, included those provided through taxation as unproductive and as not being factors of capital. Because barristers and doctors become wage labourers, means that as far as Marx is concerned they are too easily and incorrectly confused with productive workers. Also capital may well have a tendency to make all labour productive of value, for example reflecting competition by nation states to attract and retain private capital (Harvie, 2005: 150). After all, unproductive labour increases circulation time and reduces profit. None of this, however, amounts to the subsumption of society by capital. Where Marx means the real subsumption of productive labour (including technical and co-operative elements), so Negri means the total subsumption of society by capital. At this level of abstraction, it is

hardly surprising that Negri and Hardt and Negri need to jettison distinctions between productive and unproductive labour, socially necessary and unnecessary labour, value and surplus value as corollaries of their argument. Another corollary of defining "biopolitical labour" as the creator of "social life itself" is the collapse of the distinction between material and immaterial labour (Camfield, 2007: 24).

The second non-sequitur is that the subsumption of the social whole by capital implies that social labour covers all the time of life. Once again the assertion follows from a confusion of Marx's meaning. In the same sub-section of Volume 1 dealing with real subsumption (1990: 1035), Marx argues that with real subsumption comes *sui generis* capitalist production which through increases in the minimum capital requirement causes capital to assume social dimensions, thereby shedding its individual character. By this Marx means that pooled, collectively owned share capital is the concomitant of increasing scale of production under the real subsumption of labour. To argue that this constitutes the subsumption by capital of society itself (as opposed to societies of capitalists) is a misprision, as is the related claim that real subsumption is a sufficient condition for this to happen.

If their argument does not follow from Marx's logic, Hardt and Negri need some empirical justification for their claims. The analysis of s/v is clearly problematic if the bounds of the working day ($s + v$) are subsumed into life in general and it is easy to think of examples of grey areas where the bounds of the working day are uncertain, including cases of workers applying creative skills in a networked society. However this cannot be a two-way street unless capitalism has indeed collapsed by the osmosis of Hardt and Negri style globalization. Of course, workers have the freedom to be act on their own account beyond the realms of the working day, and some freedom to act independently during the working day. It is obvious that in the first case the constraint is the length of the working day itself and in the second it is the regime of capitalist control. There is little evidence that the working day is becoming shorter, or that the regime of capitalist control is weakening (for recent examples of how managers are increasing control through measurement as part of the neo liberal project, see Bohm and Land, 2007; DeAngelis and Harvey, 2006; Dowling, 2007). It is even less obvious that the freedoms in both cases are advancing to absolute levels, at the same rates, or are even direct substitutes for one another in the sense that categories such as 'affective labour' somehow transcend the working day.

By the time the third non-sequitur is reached, the logic is stretched so far that it becomes difficult to deal with without constantly reprising the inconsistencies in the first two. In view of these inconsistencies it is also difficult to form an opinion about what is meant by either of the concepts that Negri is trying to relate. For example, in this case the reader is left to interpret what is meant by "the subsumption of the social whole by capital". These related suggestions support Hardt and Negri's claim that under fully realized labour subsumption all human activity is productive. This achieves consistency with the claim that "the entire time of life is devoted to production". It is immediately obvious that not even the whole of the employed workforce is devoted to production (following Marx's categorization in the unquoted adjacent passages to Negri's citations), let alone the unemployed, the insane and the asleep. According to Hardt and Negri (2004: 130-131), the unemployed poor are indeed participants in

biopolitical production. In a chapter attacking Marx for tautology, in this statement the biggest and most nugatory tautology is uncovered, that life is production and production is life. It is on this preposterous fusion of idealism and materialism that the claim of immeasurability ('who measures whom') is advanced.

If all this seems harsh, there is one set of circumstances in which 'excess value' can be based on a logically consistent theory of value, and which follows from Hardt and Negri's notion of 'Empire'. Imperialism and monopoly capital are barriers to the realization of profit, following Lenin and Luxemburg (Hardt and Negri, 2000: 233-234), which capitalism destroys in the transition to Empire. Accordingly there is a point where the limits of capitalism are reached, when primitive accumulation ends and the whole globe is the subject of capitalist relations. Now, if as is possible, we extend Hardt and Negri's analysis further, so that at this point the conditions necessary for the realization of surplus value, that is, the incorporation of new sources of absolute surplus value through primitive accumulation, cease to exist, then so do the countervailing forces that prevent the law of the tendency of the rate of profit to fall. As the process of capitalist competition and the associated replacement of variable by constant capital continue, the rate of profit declines to zero, at which stage it becomes sensible to generalize surplus into an excess value attributable to the collective efforts of affective labour.

If this interpretation of Hardt and Negri's argument is correct in an ontological sense, then it is only their history that is at fault. It is obvious that the 'zero-profit, excess value' transition point from Imperialism to Empire has not yet been reached and indeed is some way off. Not only are large parts of the global economy still outside capitalist relations, the vast majority of its workforce do not possess basic literary skills, let alone access to the rhizomatic delights of the internet, or the luxury of self valorization through affective and co-operative labour. In 2007, 3.5% of the population of Africa had access to the internet (www.internetworldstats.com, 11th January, 2007). For the same reasons claims made about the spread of the 'general intellect' tend to be overstated. Yet Hardt and Negri are able to date the origins of the age of immaterial labour and immeasurability to the upheavals of 1968 (Hardt and Negri, 2000: 266; Negri, 2003: 77), the subsequent exchange rate crisis of 1971 and the resultant interweaving of political and economic relations producing the 'globality' of biopower and dissolution of every fixed measure of value (Hardt and Negri, 2000: 354). Implausible as they seem and notwithstanding the deductive problems discussed in this section, it is worth subjecting these claims to further scrutiny by examining how well they are likely to work as explanations of empirical trends.

Measure and immeasurability in the real world

Immeasurability arises from the loss of specificity arising from the processes as suggested by Negri (1999: 78-79). The international division of labour and post-colonial exploitation have not come to an end, but have lost their specificity, and therefore the possibility of reactivating the theory of value in concrete instances. Because these types of exploitation have become globalised, "the measure of exploitation has definitively declined" (Negri, 1999: 78).

Negri cites no empirical evidence to suggest that the use of such measures has declined. This is perhaps not surprising since if the measure of exploitation is taken to be Marx's s/v , there are few if any examples of capitalists using such measures in economic calculation, not least because of the conflation of price effects in ex post accounting measures and the theoretical and empirical difficulties associated with the computation of socially necessary labour for any given production process. In common with most Marxists therefore Negri (1999: 79) is content to blame conventional political economy for ignoring these problems. However the empirical side of the question remains important because if economists agree on the conceptual difficulties of measuring s/v and there is no evidence that capitalists have ever routinely included it in their calculations, it is difficult to see the purpose of saying that "the measure of exploitation has definitively declined".

Negri attacks this problem from a different angle, using a crude Periodization. He argues that labour power could be controlled, and measured, in days when it enjoyed relative independence. Subsequently capital succeeded in defining "the use value of labour power in terms of exchange value", first in the USA in the 1930s, then in Europe in the 1950s and then in the Third World in the 1970s (Negri, 1999: 82). No references are cited and the meaning is unclear, but if Negri is referring to the origins of exchange value as a theory of value and the displacement of labour power with utility as the source of inter-temporal value theory (Böhm-Bawerk, 1889 [1891]) then he surely means the development of marginalist economics from the 1880s. To disprove Marx's notion that the origin of profit lay in exploitation was an intellectual crusade in both Europe and America at this time (Desai, 2002: 61).

If the history is confusing, then so too is Negri's corresponding conceptual terminology. He suggests that Capital's requirement for an independent unit of measurement no longer exists, since today "one cannot imagine a definition of use value that could be given even partially independent of exchange-value" (Negri, 1999: 81). Although Negri is referring to cases of independent use-value creation by labour, there is no difference between this definition and Marx's definition of a commodity as its dual nature of exchange value and use-value (Marx, 1990: 138). However Negri is also arguing that use value has now been subsumed by exchange value, implying a transition beyond commodity production. Meanwhile, it follows from Marx's definition that if globalization (or 'Empire' for that matter) means the denomination of all relationships in money, as suggested by Negri, it also means the commodification of everything. Negri however sees what Marx calls commodity production at a moment in history, so that Negri is able to draw the conclusion referred to in the previous paragraph, that capital succeeds in defining "the use value of labour power in terms of exchange value", first in the USA in the 1930s, then in Europe in the 1950s and then in the Third World in the 1970s. So here we have the short history of commodity production according to Negri, which is born after the age of imperialism and dies in the post 1968 world of immaterial labour and immeasurability in which "labour is neither outside nor inside capitalist command" (1999: 80).

If Negri's argument makes little sense from an empirical point of view, how well do its conceptual components work as a blueprint for understanding the workings of the modern economy? The substance of Negri's argument, in the absence of empirical

grounding, is based on the marriage of Foucaultian biopolitics and Spinoza's power to act, so that "the more the theory of value loses its reference to the subject (...as a basis of mediation and command), the more value resides in affect..." where affect is the "power to act" (Negri, 1999: 79). It follows that affected labour makes labour power more important in production whilst at the same time making its measurement more difficult. One can certainly concur with this, as would the dynamic capabilities and knowledge-based view of the firm theorists, who show that as the firm invests in assets such as specialized production facilities, trade secrets and engineering experience (Teece et al 1997) over time (Dierickx and Cool, 1989), tacit knowledge is embedded in technically complex routines. Individual knowledge creation, which firms can then apply (Grant, 1996) leads to a tension between rent appropriation by individuals and team-based profit appropriation. For Grant the firm is set of incentives for co-ordinating team production. Therefore where a soccer team has complementary skills, the team members need to be tied together by long-term relations (Grant 1996: 113). If individuals understand their role in the team's effort bargain they will resist the appropriation of surplus by external stakeholders.

Hardt and Negri have ignored these and other insights from the management literature. Even so, none of this leads to the conclusion that capitalism has reached such a state of development that all is now beyond measure and that value theory should be abandoned. Indeed a knowledge-based theory requires the assumption (a physiocratic assumption in the words of Grant, 1996) that the source of value is attributable to human action within the productive process. Negri's paradox of labour's increasing importance but difficulty of measurement would appear to stem from the issue of control. Because the labour process occurs in conditions which are difficult for principals to monitor, control is a problem for capitalism.

However, the problem is a long standing one and pre-dates the age of 'Empire'. On the one hand agency theorists have constructed a theoretical world in which control is achieved through self interested behaviour of participants in 'efficient' capital markets (Jensen and Meckling, 1976), which are not dissimilar to Negri's world of dominant financial markets and exchange value. On the other there are managerialist mechanisms such as the cultivation of trust (Friedman, 1977), 'job enrichment' (Herzberg, 1966), and the mix between behaviour and output controls (Ouchi and Maguire, 1975). These and subsequent contributions have emerged inter alia out of a long-standing recognition of subjects' 'power to act'.

All of which suggests that Negri's affective labour contains categorical distinctions which require new attempts at solutions to old management problems. Affective labour as the power to act is defined as within the more general category of immaterial labour. Hardt and Negri (2000: 53) extend immaterial labour to include first, communicative labour of industrial production that has become newly linked in informational networks. Second, there is the interactive labour involving symbolic analysis and problem solving. Third, there is labour involving the production and manipulation of 'affects', for example the production of community, human contact, health service, entertainment industry, intangibles etc (Hardt and Negri, 2000: 292). Immaterial labour and affective labour accordingly produce a new collective subjectivity that post-industrial production depends on (Day, 2002: 1078).

None of these developments would however seem to exacerbate the perennial problem of capitalist control. Network embedded communicative labour implies information symmetry and knowledge sharing likely to attenuate the control problems of incomplete contracts and absence of trust identified by the agency and managerial theorists respectively. Indeed, co-operation would seem to be completely inherent in all forms of immaterial labour. Activities involving interactive labour and the production of community and human contact are likely to have similar effects. Whilst it is true that intangible assets pose more difficult valuation problems than tangible assets, the health, entertainment and similar industries, have long produced such intangible outputs utilizing human processes and there is no empirical evidence to suggest that the labour process is shifting towards less tangible activities. Even if taken together, these new classes of labour are symptomatic of the reconfiguration of global labour processes, there is no empirical evidence of a capitalist response to the resulting crisis of control. Immeasurability and its spread imply a specific crisis of risk transfer from labour to capital, to which the rational response of capital would be more intense monitoring. We might for example expect capital to shift away from output controls (which rely on ex post accounting measures) in favour of action controls (the dichotomy follows Ouchi and Maguire 1975), which involve direct surveillance, and to prefer labour contracts based on piece rates to time-based salaries, so that capital does not bear the risks of immeasurability. If anything the opposite has happened where immaterial labour is deployed and clock cards are phased out, suggesting that capital imposes control through quantifiable output measures in preference to the transaction costs imposed by close monitoring of time utilization (for a good example of the spread of this type of control in the education sector see De Angelis and Harvie, 2006). In other words it is equally plausible to argue that a shift to affective and immaterial labour involves increased control through measurable outputs against targets.

If the consequences of immeasurable affective and immaterial labour are debatable from an economic point of view, the sociological implications are also questionable. Hardt and Negri suggest that in these 'new forms' (2000: 29) of productive labour, exploitation immerses labour in social relations but at the same time activates critical elements that develop the potential of resistance. Here the 'potential of resistance' is the obverse of capital's problem of achieving control in the face of incomplete contracts or the absence of trust. In judging the behavioural reaction of the worker to capital's attempt to overcome these problems, an ontological leap of faith is necessary to suggest that the corollary is an attitude of resistance. The propensity to resist (or to comply) with the requirements of capital on the part of immaterial labour would seem to be contingent upon a number of conditions, including the position in the organizational hierarchy, the perceived effectiveness or otherwise of controls and the distribution of surpluses and rewards within the organization.

Armstrong (1991) shows that capital can more effectively overcome control problems by devolving trust and commensurate rewards through limited levels of the corporate hierarchy and denying access to the remainder. The idea is similar to the economist's notion of 'efficiency wages' (for example Katz, 1987), albeit applied to the top of the corporate hierarchy. Strategic jobs, which are difficult to monitor, in turn attract a loyalty dividend (Wright, 1985). The effect of such policies would be to create an attitude of compliance amongst an important minority of employees, which under a

reconfigured labour process would more likely include those engaged in the various categories of immaterial labour. Similarly, top management might employ ideology to mitigate apparently selfish utilization of tacit knowledge to consume wealth within the organization, consistent with Penrose's view that firms and their managers are essentially profit-orientated, and that managerial opportunism and the agency problem constitute only a special case (Lockett and Thompson, 2004). However, there is little rational basis for managerial pursuit of abnormal profit, since it derives from a contradictory appeal to the selfish interests of another group, i.e. the shareholders, and because normal rather than abnormal profits are a sufficient basis for the survival of the firm. In other words, for all these reasons, the potential for resistance is limited and occurs only within the parameters set out by the normal process of labour subsumption and the contradictory position of managers in capitalist social relations.

Conclusion: 'Resistance is useless'

Insofar as resistance is possible, it would appear to manifest itself in the form of self-valorization and self-valorization represents an extension rather than negation of the valorization component of the general labour process. However, for Hardt and Negri, self-valorization does not mean the private appropriation of rent by poorly monitored employees. Rather it is the virtual power of labour to create an 'expansive commonality', which (of course) is beyond measure. Why self-valorization should take this form and not rent appropriation is not clear, nor is the material basis for the shift from work-based resistance to virtual empowerment. Even so, we are expected to believe that because workers through their own actions are creative beyond the control of capitalism, that the concept of organization as a contested terrain can be abandoned.

Resistance is political as well as economic, and Hardt and Negri translate their understanding of the new organizational terrain into a programme of political action. Here is their equivalent 11th thesis on Feuerbach and possibly the reason why *Empire* has been compared to the *Communist Manifesto*. So what does the programme of action amount to? In the world of *Empire* "militants resist imperial command in a creative way", and "militancy...makes rebellion into a process of love" (Hardt and Negri, 2000: 413). *Empire*'s last few pages read less like a manifesto than a statement of absolution for the stereotypical 1960s hippy with a subsequent career in the 'creative' industries, whose angst at the working class defeats of the last two decades of the twentieth century has been mitigated only by disproportionate consumption of the world's resources and the inclusivity offered by the proletarianisation of culture. If the argument put here achieves anything, it will be to reduce the toxicity of 'militant' as a term of abuse when used by the right-wing press.

It is with the use of several important terms, including immeasurability, that the book has its most serious problems. As has been demonstrated, terms are poorly defined, are logically inconsistent and do not relate well to empirical evidence. For these reasons the immeasurability concept fails to undermine value theory and is itself valueless.

Meanwhile Marx is relied upon by Hardt and Negri and caricatured at the same time. Marx's triumph was that his work was consistent, philosophically, economically and

politically, his tragedy was that his work was nonetheless poorly understood by 'Marxists' ready to use his ideas for their own ends. In the case of Hardt and Negri, *Empire* will of course be misunderstood precisely because of its inconsistency. Tragedy will not however follow, since all that seems to be inspired is for the reader to carry on with what they are already doing. Resistance in this form will not strike fear into the boardrooms; it cannot be valued, it is immeasurable. It is useless.

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