Cycles of Alienation: Technology and Control in Digital Communication

*Abstract: Amongst scholars in Internet Studies (IS), Marx’s work on alienation has generally remained in favour. Its development in the field, however, has been uneven. Competing traditions claim alternative moments of alienation germane to their program and objects of study. This essay identifies and evaluates contemporary thinking concerned with alienation and high-technology capitalism. From the findings, I suggest a theory of alienation in digital communication that highlights the skill invested in users through human-technology co-developmental processes.*

*Keywords: Alienation, Technology, Marxism*

**Introduction: Alienation and Communication in High-Technology Capitalism**

Amongst scholars in what Christian Fuchs and Nick Dyer-Witheford (Fuchs 2012; Fuchs and Dyer-Witheford 2013) call Internet Studies (IS), Marx’s work on alienation has generally remained in favour. Its development in the field, however, has been uneven. Competing traditions claim alternative moments of alienation germane to their program and objects of study.[[1]](#footnote-1) Dissimilar interpretations of Marxian theory likewise mark the concept’s use today, with the relevance of alienation tied not only to uneven moments of production in high-technology capitalism, but to alternative traditions within Marxism.

As I’ve argued elsewhere (Greaves 2015), Marxian IS has shown a tendency toward polarization when dealing with user-technology relationships. Foundational works within the field (Hardt and Negri 2000, 2004; Dean 2005, 2012; Fuchs 2013; Fuchs and Sevignani 2013) locate agential power entirely with digital proletarians or the technological, which acts as a proxy for capitalist command. The operative distinction in theories of alienation in Marxian IS is likewise found in the dominating power of one pole within human-technology relationships. This is perhaps to be expected, as the problem of subject and object is the pivot upon which Marx’s theory of alienated activity turns.

Discussion of these interpretative differences, concerning the estrangement of the object and the objectification of the subject within Marxian IS, will be predominant in this essay’s middle sections. Before this, however, I begin with some general remarks on alienation in Marx’s writing, developed through readings of the “Economic and Philosophical Manuscripts (1844)”, the fifteenth chapter of *Capital* Volume One, and “Results of the Immediate Process of Production”. I argue that alienation and alienated activity are essential to understanding Marx’s conception of technology as an active relation determined by class conflict. In developing this reading I also draw from labour-process theory’s design critique of industrial technology—specifically, Noble’s (2011) contention that the form of alienated activity in production is determined in struggle between the working class, capitalists and their representatives. The autonomist Marxist concept of ‘cycles of struggles’ is then introduced to capture historical circumstances through which alienation proceeds, what I’m calling cycles of alienation.

With the cycles of alienation concept in place, I review prominent theories of alienation in digital-communication technology. Rooted in political economy, what I term foreclosure theory seeks to identify the capitalist codification of technology through the relations of production. Co-development appears here as economic subordination and political subjugation. The activity of users is oriented and/or captured by processes of accumulation that exceed their control. The agency of digital proletarians, manifest in lines of technological development, is here displaced in favour of an economistic critique of the relations of production, in which capital’s ownership determines the form of technology and alienated activity.

At the other pole, recent work in the autonomist Marxist tradition discovers alienated activity within *affective* forms of production. Michael Hardt and Antonio Negri (2000, 2004) argue that alienation infects the circuits of production which constitute the dominant form of postmodern capitalism, what the pair identify as Empire. Of primary interest here is the question of universalized knowledge/skill amongst a multitude of groups, and whether capital, in raising the skill of proletarians, produces “above all, its own grave-diggers” (Marx and Engels 2011, 78). Alienation is manifest here as estranged potential amongst proletarians. Similarly, Dyer-Witheford (1999, 2000, and 2010) develops his critique of alienation in contemporary capitalism through the third form that Marx identifies, estrangement from our species-being. Here, alienation is the separation of the proletarians from control over the common direction of our species. Dyer-Witheford, however, allows for alienation at the technical level (Dyer-Witheford 1999), and it is through Dyer-Witheford that I return to the cycles of alienation concept, here in the context of what he terms ‘high-technology capitalism’.

 Out of the critique of foreclosurist and autonomist positions, I suggest a theory of alienation in digital communication that highlights the skill invested in users through co-developmental processes. Returning to the “Manuscripts” of 1844, I argue that struggles over the alienated activity of producers yield its content, and, in turn, suggest disalienating activity in each moment of alienation that Marx identifies.

**Marx, Labour Process, and Cycles of Alienation**

As an economic or philosophic concept, alienation predates Marx. It is in Marx’s “Manuscripts” (1992), however, that alienation first emerges from capitalist social relations. Like much of his early writing, the “Manuscripts” show Marx’s evident study of and disagreement with G.W.F. Hegel. With alienation, Marx historicizes what was in Hegel the problem of the individual’s objectification as such, inverting a philosophy Marx found “standing on its head” (Marx 1990a, 103). “For Hegel, the process of thinking, which he even transforms into an independent subject, under the name of the Ideal, is the creator of the real world, and the real world is only the external appearance of the idea. With me the reverse is true: the ideal is nothing but the material world reflected in the mind of man, and translated into forms of thought” (102).

Unlike Hegel, alienation is for Marx a particular form of existence that arises with the wage relation, as Marcello Musto argues (82). This is clear from the concept’s elaboration in the “Manuscripts”. Here Marx describes four forms of alienated activity: (1) estrangement from the products direct producers create; (2) estrangement in the processes of production; (3) estrangement from our species-being, (our control over human sociality); and our (4) estrangement from one another. Today, alienation appears as coterminous moments of estrangement present in capitalist life. Yet these moments do not emerge fully formed from the foundational estrangement of capitalism. Alienation is historical, but of equal importance is that, like Hegel, the abstract, conceptual form of alienation suggests an impellent power.[[2]](#footnote-2) The character of its moments are fluid and determined by, amongst other things, the imperatives of capital, working-class activity and power, ideology, and historical circumstances. Maxine Berg notes a similar progression in Marx’s discussion of ‘manufacture’: “though [Marx] clearly intended it to be an abstract model, he included many historical signposts” (Berg 1994, 62). In general, we can call this aspect of the theory ‘the concrete historical character of alienation’, and it’s most easily seen with the second moment that Marx identifies, in which technological changes in labour-process—mediated by class struggle—determine the objective form of alienation in production, while conditioning its other moments.

 In the “Manuscripts” moments of estrangement appear as a developmental relation—from separation of control over the commodity, to that of labour-process, to life process more generally and our subjective estrangement from one another. Modern labour-processes, estranging individuals from their activity within the working-day, yield individuals estranged from their species-life (Marx 1992, 328). Likewise, “an immediate consequence of man’s estrangement from the product of his labour, his life activity, his species-being, is the *estrangement of man from man*” (329 – 30; emphasis in the original). The impellent and developmental logic behind alienated activity in “The Manuscripts” is recuperated by Marx in another text unpublished in his lifetime, “Results of the Immediate Process of Production” (1990), originally written for the first volume of *Capital*. In “Results”, Marx argues that the general transition to wage labour is tied to the emergence of capitalism, as it is alienated activity. Indeed, the first moment of alienation corresponds analytically to what Marx describes in “Results” as the *formal subsumption* of labour to capital. Subsumption is a specialized term in Marx. It refers to stages of production during which capital confronts and eventually transforms pre-capitalist productive social relations and forms of producing.

When a peasant who has always produced enough for his needs becomes a day labourer working for a farmer; when the hierarchic order of guild production vanishes making way for the straightforward distinction between the capitalist and the wage-labourers he employs; when the former slave-owner engages his former slaves as paid workers, etc., then we find that what is happening is that production processes of varying social provenance have been transformed into capitalist production (1020).

The transition from pre-capitalist to capitalist social relations is found in the productive lives of both direct producers and capitalist overseers. During the actual working day, however, the logic of valorization has yet to impose its transformative potential, and the character of labour power remains essentially pre-capitalist in content. The skill and knowledge of how to produce remain in the worker. Under this condition, “the relation of capital/labour is marked by the hegemony of the knowledge of craftsman and of workers with a trade” (Vercellone 2007, 15). As a preliminary stage, Marx characterizes this in the “Manuscripts” as “the *loss* of the object,” or final product (Marx 1992, 235).

The objective and subjective degradation of the worker follows from the first form of estrangement. They are consequences materialized in the processes of *really* subsumed labour, the subsequent stage of development.[[3]](#footnote-3) With this second stage, transformations begin in the labour process toward its intensification. The market logic of improvement is now impressed in productive methods.[[4]](#footnote-4)

The *social* productive forces of labour, or the productive forces of directly social, *socialized* (i.e. collective) labour come into being through co-operation, division of labour within the workshop, the use of *machinery,* and in general the transformation of production by the conscious *use* of the sciences, of mechanics, chemistry, etc. for specific ends, technology, etc. and similarly, through the enormous increase of *scale* corresponding to such developments (Marx 1990b, 1024; emphasis in the original).

Under the real subsumption of labour to capital scientific study is directed toward production, specifically the areas of technological change and labour process. The objectification of workers, rooted in the wage relation, is expanded and intensified. Industry is, for example, able to eschew the predominance of handicraft methods through mechanization, as Marx notes in *Capital* (Marx 1990, 504). Some four-plus decades later, F.W. Taylor (1911) makes a similar claim to the owners and managers of production, arguing in *The Principles of Scientific Management* that rule-of-thumb methods, directed by workers, can be displaced by the careful application of scientific study and calculation to labour process. The application of scientific management by capital allows for intensification of the working day, toward the realization of greater value, whereas increased profit within mere formally-subsumed production may only be generated by extending the working day. The real subsumption of labour to capital is thereby the objective form of an imperative that compels production processes toward improvement. Bertell Ollman makes a similar point when he writes that “it is man’s alienated relations to his activity, products of other men, as expressed in overt relations between things, that is the subject matter of Marx’s economics” (1971, 158).

 But these notes define a general tendency—more character than content. Changes to the labour process are by no means linear nor determined by imperative outside of working-class organization. While the economic calculations of management materialize in factory technology, lines of development in technology and labour process emerge from the conflicting desires of capital and workers, over labour process and a plurality of other aspects of production. The activities of workers may then act as countervailing forces to that of capital in its determination to control and develop labour process on its own terms. Perhaps the best study of this elaborate course is David Noble’s *Forces of Production*. In it Noble details how twentieth-century American capital had options in its methods to automate the labour of skilled machinists. Two technologies appeared as the predominant choices, one which “lent itself to programming in the office, and management control over the labour” (Noble 2011, 151); while another resembled the approach used with later player pianos,[[5]](#footnote-5) in which “machinist skill… was acknowledged to be fundamental and irreplaceable store of the inherited intelligence of metalworking production” (150). The decision by management to implement the former comes about through a desire to wrest power from a strong machinists’ union, as well as the postwar ideology of total factory automation.

 If profit is central to the manifold notion of alienation introduced above, Noble believes that, in the production process, the improvement imperative is generally subordinate (most evident in times of crisis) to the reproduction of class domination. Agency in productive methods is, in other words, contingent upon its simultaneous cooperation with management.[[6]](#footnote-6) It requires acceptance of alienated activity. “When the goals of profit-making and efficient production fail to coincide with the requirements of continued domination, capital will resort to more ancient means: legal, political, and, if need be, military” (321). While this is no doubt accurate in exceptional circumstances, the insight cannot be untethered from a general profit-centered imperative manifest in labour process. Class domination is intimately tied to production, *and* the **production process requires reproducible profit for its success. It contains imperatives irreducible to direct control over labour process, as more flexible forms of production in the post-Fordist era have demonstrated. To quote Marx: capital “**has one sole driving force, the drive to valorize itself, to create surplus-value, to make its constant part, the means of production, absorb the greatest possible amount of surplus labour” (Marx 1990, 342).

The direction of production allows for differential paths within the general need to reproduce class domination. If the motive force of alienation is capitalist determination of the range of class conflict, basic imperatives and tendencies of capital including the loss of control for workers inherent in their objectification and the estrangements of real subsumption make their way into lines of technological development. Control, in other words, is situated within the valorization process, constituted in part by the estrangements of capital and determined through class conflict.

 The content of alienation can therefore be understood as cycling, with its moments mutually reflected in one another. The autonomists of the 1970s developed the concept of a cycle of struggles to identify changes in the relations and forces of production across the twentieth century, which I’ll use to frame alienation moving forward. As Nick Dyer-Witheford explains: “In periodic restructurings capitalism constantly increases in technological intensity and the scale and scope of its social organization, but these shifts answer to and are answered by changes in the composition of labor that create new points and agents of antagonism” (2001, 160). Sylvia Federici and Mario Montano’s “Theses on the Mass Worker and Social Capital” (1972) lays out the general methodology for capitalist transformation through the cycle of struggles concept, drawn from the history of twentieth-century class struggle. They identify the transformation of labour-power from “passive, fragmented receptacle of factory exploitation,” during periods of the nineteenth century, to “international political actor, the political working class,” formed during the international struggles of the first quarter of the century (6). The international class composition of this movement would see vanguards begin the struggle, following from crystallized divisions within the working class. In the 1930s, Taylorism would decompose the mass-vanguard dichotomy through which this iteration of the international revolutionary working class was composed. Out of the destruction of hard-won skill, the “mass worker” emerges from organization around the Taylorist factory, a new political manifestation of the working class. In “Archaeology and Project: The Mass Worker and the Social Worker”, Negri adds the latter subject to this history of transformation. The subjective character of the mass worker grasped the power they held, but the displacement of trade unionism in the 1960s and 70s had taught workers that the relationship between capital and labour-power had been transformed. The mass worker, with its connection to labour-power was replaced by the socialized worker, exposed to multiple capitalist antagonisms outside of the factory. Negri’s analysis is a geneaology of the revolutionary subject “from the working class, ie that working class massified in direct production in the factory, to social labour-power, representing the potentiality of a new working class, now extended throughout the entire span of production and reproduction” (Negri 1988, 205).

As Dyer-Witheford’s summation suggests, technology remains a reactive force in the cycle of struggles concept. Its development is the product of the working-class, in some sense, but the direction and codification of technological development comes from above and is motivated by control, similar in this way to Noble’s labour-process theory. This movement is perhaps best condensed by Marx in an oft-quoted section of *Capital*: “It would be possible to write a whole history of the inventions made since 1830 for the sole purpose of providing capital with weapons against working-class revolt” (Marx 1990, 563). Mario Tronti (1979), in a foundational text of autonomism, would generalize this thought. Tronti argued that capitalist development is commonly subordinate to working-class struggle and organization. Innovation is directed toward the replication of ruling-class domination—just as Taylorism fractured working-class power.

In the cycles of struggle methodology, as in autonomist thought more generally, class conflict directs change within forces or production, a central point in the concept of alienation. Struggles and their results, in other words, form the content of alienation. A cycles of alienation methodology, in the first place, guards against the tendency to ossify the content of alienated activity in criticism as fixed, fast-frozen categories. Similarly, the activity of proletarians, whether on networks composed by capital or otherwise, is generally irreducible to foreclosed political action—as mere reproductions of capital—if we accept the cycles of struggle concept put forward by autonomist theorists of the 1970s. Yet, as we’ll see, the technical basis of contemporary capitalism is such that engagement with identifiably-capitalist digital technology requires no comparable collaboration with capital, as was the case for class struggle from below to imprint itself on technology in Noble, and Federici and Montano. Rather, the diffusion of productive technologies and technical capacities across populations suggests multiple points available for appropriation.

**Co-Development as Accumulation**

If it is evident in *Forces of Production* that alienation is materialized in technological development through the mediation of class conflict, this insight becomes amplified and extended in studies of digital communication. The co-development of subject and object often appears, within Marxian IS, as the domination of the latter by the former, what I’ve called foreclosure theory. Although more generally meant to denote the interruption of working-class political activity through ideology and its manifestations in technology (Greaves 2015, 195 – 204), foreclosure theory here identifies a particular form of design critique, in which capitalist power commands proletarian activity in digital communication.

The content of alienation and the constitution of agency in online activity of course require redevelopment in light of historical change, as ‘cycles of alienation’ suggests. This process involves reassessment of the conditions and analytic purchase of the moments of alienation in its present forms. In an analysis of Facebook, Christian Fuchs and Sebastian Sevignani discover in social media use. Against hegemonic claims of increased participation, Fuchs and Sevignani argue that digital media *not* organized by communist principles transforms users into labourers. Non-communist sites render communicative and cooperative activity for the production of profit. The pair shift the terms of alienation somewhat, departing from Marx’s use of species-being, which they understand as sensuous activity, and from the fourth form of alienation, alienation from one another. The four moments that Fuchs and Sevignani identify are instead “alienation from oneself, the alienation from the objects of labour (instruments and objects of labour) and the alienation from the created products” (Fuchs and Sevignani 2013, 257). As with Marx’s work in the “Manuscripts”, the terms of alienation are constituted historically, although this is implicit, rather than developed, in Fuchs and Sevignani.

The emergence of Facebook as a dominant medium in contemporary life is based in qualitative changes in the accumulation process, as capital adapted to the crises of Fordism—what Harvey calls flexible accumulation (Harvey 1990, 141 – 172). Taking Harvey at a very general level, we can say that the hegemony of Fordist mass-industrial society in the United States involved the combination of Taylorist productive methods and a Keynesian labour/social contract. In the 1960s and 1970s capital encounters a number of barriers to accumulation that it cannot overcome in its Fordist form—working class, proletarian and anti-capitalist social power, excess capacity, high fixed-capital investment, and falling consumer demand. Subsequent economic restructuring emphasized flexibility in production, against the rigidities Fordist life. Highlighting elements of proletarian and anti-capitalist struggle, Hardt and Negri (2000, 273-4) argue that the flexibilities associated with life and labour today are a corrupted form of the rejection by proletarian youths of rigid, disciplinary Fordist society and its labour contract. The direct forms of refusal captured in the social experiments of the 60s and 70s and the valuation of creativity, communication and mobility are turned against those posing demands. Materialized into a mode of accumulation that valorizes communication and knowledge, capital embraces flexible forms of labour organization. The content of alienation, like that of labour process, transforms as the cycle progresses.

Yet, some continuities remain. In the theory of technological mediation developed by Fuchs and Sevignani one can see parallels to the labouring of industrial workers in modern, really-subsumed production. Marx deals extensively with the objectification of labour in the chapter “Machinery and Large-Scale Industry”. From his study of Manchester factories and the work of technologists like Andrew Ure and Charles Babbage (Roth 2012, 1234), Marx believes that factory labour under conditions of real subsumption is rendered mechanical, as the worker is incorporated into the vast factory apparatus. “The machine does not free the worker from work, but rather deprives the work itself of all content” (Marx 1990, 548). Similarly, Fuchs and Sevignani argue that our communicative activity and cooperation on Facebook function to better position users for capital. Activity is instrumentalized on the platform, directed toward the accumulation of data that will inform targeted advertisements. In this form of unwaged labour, users are alienated from and the algorithmic processes and platform decisions that underwrite the capture of value on Facebook; they therefore lack the means to collectively change the medium. Users “do not have the decision power to influence Facebook’s rules and design, such as the content of the terms of use and the privacy policy, the privacy settings, the use of advertisements, which user data is sold for advertising purposes, the standard settings (e.g. opt-in or opt-out of targeted ads), required registration data, the placement of commercial and non-commercial content on the screen, etc” (Fuchs and Sevignani, 2013, 258).

Mark Andrejevic (2011) has further identified historical detail in the alienated activity of content creators, in what he calls the online economy. Like Marx in the “Manuscripts”, Andrejevic begins with the estrangement of the worker from the products of their labour. In the online economy, this is the estrangement of user-generated content. He argues that the alienation of users from their data is a necessary condition of online exploitation. Data driven marketing is able flourish in the space created by this condition. In particular, an industry of predictive market analytics emerges to facilitate capital. Users are in effect also alienated from the tools of production in this mode, as the foundational estrangement advances and concatenates. The activity of exploited users is then estranged in the act of value creation. “The goal of predictive analytics is, in a sense, both pre-emptive and productive, predictive and manipulative: to manage risks before they emerge or become serious while at the same time maximizing sales. The goal, in other words, is to integrate possible futures into present behaviour and thereby to manage the future” (Andrejevic 2011, 281). Additional forms of technological mediation are introduced into the valorization process toward the intensification of surplus-value, though its realization rests in a higher order of abstraction than traditional circuits of accumulation. The creation of content is then turned back upon users. Data is captured, alienated and returned as deformed passages in future online activity, tailored toward commodity consumption. Alienated activity is deepened by intensifying capitalist technological codification.

Alienated and compelled activity appear here as the basis of exploitation. The manifestation of capitalist imperatives in technology renders online activity for its exchange value, what the philosopher of technology Andrew Feenberg (1999, 87 – 9) identifies as ‘technical codes’, or the social and economic values manifest within technologies. For Feenberg, technical codes situate objects and technologies by the social meaning to which they’re attached. Social meanings are of course contested and fluid, open to interpretation and change. We can, all the same, identify the mediating presence of socially-determined biases present in technology, apparent in the ideologies of capitalist command and total automation from Noble’s analysis. Combining Feenberg and Andrejevic, management of user horizons by predictive analytics appears as the political content of alienation in its second moment, its operative technical code.

Based in the alienation of digital proletarians, this system of accumulation is at once both expansive and personal, constituted by universal technical mediation in the most unremarkable activities as well as the most complex. Content producers are said to be in a poor position to resist their alienated activity. The interactions of users present a mystified impression of genuine participation, with no actually democratic participatory activity occurring on capitalist networks. While this is in some sense true, such an understanding leaves us with impoverished conceptions of alienation, alienated activity and technological change, underscored by any number of movements that push back against the intrusions of digital capital. Such protests are often characterized as trivial or aesthetic, and no doubt these types are common—concern with changes to Facebook users’ ‘timelines’ led to a number of protests immanent to the site, including a few hundred thousand account deletions. We should not, of course, confuse radical or transcendental demands with minor changes that capital can easily allow, nor with so-called ‘clicktivism’. Such moments ultimately affirm the power of capital online and, taken to the extreme, could be considered a form of collaboration with capital, as Noble’s work suggests. However, by ignoring user protests we displace the motive force of class struggle in favour of a perspective that highlights the relations of production in technological development.

The recognition that user inputs and protests can influence development in a proactive way remains an important one. Returning to Feenberg, we can say that the failure to transform technology lies not with the technology itself, obviously, nor with capital, but with the left and its failure to better incorporate solidaristic and communistic technical imperatives in its demands and movements. It is, in short, a failure of organization, despite attempts at incorporating such values in digital communication. Fuchs and Sevignani (Fuchs and Sevignani 2013, 268; Fuchs 2011, 51; Fuchs 2013, 213 and 221), look toward communist digital architecture to facilitate the development of better technology, displacing recodifying potential from activity on capitalist-encoded social networks. Drawing from autonomist-feminist work on domestic labour in the 1970s and from the political economy of social networks, Laurel Ptak’s Wages for Facebook campaign has drawn attention to the social relationships through which Facebook functions and those which it, in turn, supports. In doing so, the campaign identifies the unique position users, as direct producers, hold in the online economy, and, therefore, their ability to disrupt its normal functioning.

Ptak situates the recognition of such power within a greater praxis. Struggle against the valorization of users’ free labour may emerge *a priori* in the development of class solidarities (a perspective which highlights users’ class activities rather than architectural finality) and subsequent technological recodification. Ptak, in this way, points to possible disalienating activities through the crucible of class conflict. Exploitative in the Marxian sense, the expansion of free labour in the online economy generates its own contradictions, especially amongst a technologically-literate proletariat.

**Co-Development and Liberation: Estranged-Gravediggers Online**

Autonomist-Marxist theories within IS find more political potential in online activity than those of the foreclosurists. The knowledge and skill of users tends to occupy a central position and is likewise important to contemporary moments of alienation. Unlike the reactive form of technological development in Fordist capitalism, the highly technologized social field of the twenty-first century is readily available for appropriation because there appears today a simultaneous levelling of knowledge amongst proletarians, matched with an investment of skill. This social investment is tethered to a “qualitative leap forward in the technological organization of capital” (Hardt and Negri 2000, 272). The generalized knowledge/skill of users is however impeded or deformed by capital’s desire for accumulation. Radical aspirations are taken down unhelpful paths; commodification denies proletarian self-determination, as we proletarians are estranged from our autonomous becoming.

The socialized worker of Negri, identified through the cycles of struggle genealogy, is similar to the subject of contemporary autonomist-Marxist IS, or perhaps more correctly is its predecessor or embryonic form. Hardt and Negri’s *Empire* trilogy identifies the heterogeneous multitude as the contemporary subject for capitalist transformation. The multitude, as the name suggests, is composed of differentially exploited groups. Although there is a recognition of uneven circumstances, subjects labour under certain common conditions, what Hardt and Negri regard as the hegemonic dominance of ‘immaterial labour’. This normative quality includes increased emphasis on communication and intellectual forms of production. In the multitude, immaterial labour operates as two dominant principles or forms. “The first form refers to labor that is primarily intellectual or linguistic, such as problem solving, symbolic and analytical tasks, and linguistic expressions. This kind of immaterial labor produces ideas, symbols, codes, texts, linguistic figures, images, and other such products. We call the other principle form of immaterial labor ‘affective labor,’” which “is labor that produces or manipulates affects such as a feeling of ease, well-being, satisfaction, excitement, or passion. One can recognize affective labor, for example, in the work of legal assistants, flight attendants, and fast food workers (service with a smile)” (Hardt and Negri 2004, 108).

Given these hegemonic conditions, the multitude is a new proletariat defined by the inclusion of “all those whose labour is exploited by capital” “and not a *new industrial working class*” (Hardt and Negri 2000, 402). Crucially, the multitude is capable of appropriating the tools of Empire for its radical desires. The “invention power”, or the power to transform technology and social relations also found in socialized workers (Negri 2005), is evident in its constitution. “The scientific, affective, and linguistic forces of the multitude aggressively transform the conditions of social production” (Hardt and Negri 2000, 366). The second form of alienation is then qualitatively different for the postmodern multitude than for those exposed to either advanced industrial technology or the digital networks constructed by the foreclosurists.

In *Empire*, alienation spreads through networks organized by capital. It appears as a loss or lack of potentiality for the multitude in their experience of life processes (23). It is a degraded future under the command of capital that is returned to the multitude, the progeny of those proletarians and anti-capitalists that opposed the strictures of Fordist capitalism. Communication and cooperation are reformatted toward the production of value, as internet communication becomes the site of a very particular form of proletarianization. Here alienation becomes an instructive lens through which to view capitalist exploitation. “When our ideas and our affects, or emotions, are put to work, for instance, and when they thus become subject in a new way to the command of the boss, we often experience new and intense forms of violation or alienation. Furthermore, the contractual and material conditions of immaterial labor that tend to spread to the entire labour market are making the position of labor in general more precarious” (65 – 66). An expanded elaboration of the immaterial labour hypothesis is outside the purview of this essay, and, as Camfield (2007) notes, in any event its definition changes from 2000’s *Empire* to 2004’s *Multitude*. In general, however, we should recognize that for Hardt and Negri estrangement is an infection that spreads through the terms of immaterial labour’s qualitative dominance and into the bodies and minds of its members. The exceptionally communicative and interactive form of production, enabled by multiplication of connections available through the online economy, means that endogenous forms of control expand outward exponentially. Outside of labour directly mediated by digital technology, the immaterial-labour hegemony involves the manipulation of affects, as in service work and traditionally feminized forms of waged and unwaged labour, and communicative aspects also function to reformat industrial production organized through digital networks (Hardt and Negri 2000, 29 – 30).

Empire is therefore said to alienate *through* communicative networks. As in the final subjective form of alienation identified by Marx in 1844 as well as that of our species-being, the multitude is alienated from one another and from control over the direction of its existence. Likewise, the separation of users from that which they produce would seem to correspond to Marx’s initial moment of alienation. Hardt and Negri are however sure to clarify the forms alienated affectivity take under conditions of Empire. Despite differences between texts in Hardt and Negri’s development of immaterial labour, class relations dictate the form of command that constitutes alienated activity in both *Empire* and *Multitude*. This insight fails, however, to be extended to technology itself. The pair thus critique the limitations of alienation as it applied to industrial production: “Alienation was always a poor concept for understanding the exploitation of factory workers” (111). If Marx intends alienation to include the historical separation of workers from control over the industrial labour process, Hardt and Negri develop the incompatible position that capitalist social relations, under conditions of Empire, can be overturned through *hybridizations* between individuals and digital technology (Hardt and Negri 2000, 367). Guiding Hardt and Negri’s view of hybridization is the implied belief that digital communications technology is necessarily available for the multitude to realize their radical desires—a species of instrumentalism. Capitalist technological codification of productive technologies appears rather unproblematic, as distinctions between (the thoroughly modern conception of) subject and object are dissolved in one hybridized unit. The aforementioned invention power of the multitude supersedes undesirable materializations of technical code. Estrangement within productive activity is thus eschewed. Productive technology in the postmodern era, instead, appears available for appropriation within the multitude, through a generalization of knowledge, what Marx calls in the *Grundrisse* (1973, 706) ‘the general intellect’. Carlo Vercellone comes to a similar conclusion, when he identifies the “increasingly collective nature of technical progress” (Vercellone 2007, 31). The obverse side is that collective, communicative and affective aspects of production—held within the greater part of the multitude—are the raw materials appropriated by capital and the tools for its transformation.

 Neither the relations of production nor class struggle between the multitude and Empire appear to materialize in productive technologies. The second form of alienation is here displaced in the concept’s re-evaluation. This displacement suggests a near universal ability to appropriate the tools of production toward communization. While encouraging, the implied neutral codification of technology dislocates the potential, inherent in critical theories of technology, to identify not only points of necessary recodification but contradictions and antagonisms inherent in capitalist digital communication technology.

In a critical theory of technology, political codes of both technology and alienation would appear related through struggle between capital and workers, both waged and unwaged. Struggle over the conditions of use/labour and the content of technology creates new lines of development that concretize and codify technology by socialist alternatives. Such a position would affirm the alienated content of technology and labour process, while situating this same content within a dialectic of class conflict. Proletarian-technology combinations may then appear inconsistent and antagonist. Capitalist command may render certain technological usage apolitical, as Fuchs argues. One the other hand, struggle would appear as a re-conditioning device, both for proletarians and their tools, in which new lines of technological development and subjectivity appear, the result of conflictual and contradictory imperatives and actions.

Within the autonomist tradition, Nick Dyer-Witheford has retained criticality while simultaneously highlighting the inventive power of proletarians. “If the capital relation is to its very core one of conflict and contradiction, with managerial control being constantly challenged by countermovements to which it must respond, then this conflictual logic may enter into the very creation,” and, we can add, development, “of technologies” (Dyer-Witheford 1999, 71 – 2). Technologies appear in this account as sites of struggle themselves, instead of mere passageways through which struggle occurs. Indeed, Dyer-Witheford’s work generally corresponds to the model of alienation developed in the opening section. In “Digital Labour, Species-Becoming and the Global Worker” (2010), Dyer-Witheford focuses his attention on the relatively neglected fourth form of alienation, species-being (485). Like Hardt and Negri, Dyer-Witheford argues that proletarians are separated from control over our activity by capital, which he sees as the historical plasticity of humanity, our ability to adapt and change, which he calls species-becoming.

Marx understands the unfolding of species-being as determined by class and conflict. Alienation, the central problematic of the Manuscripts, is not an issue of estrangement from a normative, natural condition, but rather of who, or what, controls collective self-transformation. It is the concentration of this control in a sub-section of the species, a clade or class of the species–who then

acts as gods (albeit possibly incompetent gods) – to direct the trajectory of the rest (487).

Emergent forms of commodification block autonomous moments of species-becoming, subordinating species-life to capital: “micro-systems of control assembled from digital, genetic and mechanical components which approach a life of their own” (494). This estrangement, however, is also manifest in technological development and its control.

 The identification of capital in the technical—a devil in the details—is a key point of departure for Dyer-Witheford within autonomist IS. Although Dyer-Witheford ultimately affirms the dissolution of the subject-object distinction, replaced by ‘cyborgs’, ‘flesh machines’, or the ‘cyber-carnal’, the process of dissolution takes place on the combined and uneven terrain of capital. Determination of species-becoming is only granted to an elite few (495). Instead of proliferating combinations, Dyer-Witheford endorses the establishment of non-capitalist criteria by which to judge and transform technology, “tantamount to a call for the reappropriation of the means of production” by proletarians within a framework of collective planning. (Dyer-Witheford 1999, 215, 216). The knowledge and capacities invested in proletarians may then be turned against capital through communist recodification of the technical. This would surpass the purely reactive form of technological development, assigned by the original cycle of struggles methodology, to include a critical inventive-power in proletarians.

A dialectic of class struggle is equipped to identify moments of alienated technical code for recodification (Feenberg 1991, 1999), and Dyer-Witheford’s emphasis on the inventive-power of proletarians suggests paths for the communist recodification of technology to travel. As I’ve suggested, alienation generally, and alienation from control over technological development more specifically, provide a useful analytic lens from which judge technological development. The other side of this is the discovery of disalienating moments that could help generate criteria for recodification.

Foreclosure theory has attempted a dialectic, similar to what I’m suggesting. Unlike a model of active class struggle, however, the dominant power-relations in production are seen to determine proletarian political claims (Fuchs 2013; Fuchs and Sevignani 2013; Dean 2005, 2012). Marxian IS is indeed no stranger to the claim that capital and the state reappropriate political and emancipatory tendencies. Rao et al. (2015) have recently identified corporate appropriation of the open-source movement as a response to the struggles of digital proletarians. The skill and knowledge of proletarians, identified by the autonomists, here proceeds under terms appropriate for capital. As with the demands of Fordist youth that rebelled against epochal conformities, the terms of social or technological transformation reappear in the service of capital. Likewise, increased sociality and connections have been transformed into an apparatus of capitalist (Andrejevic 2011) and state surveillance.

If capital finds ways to reinscribe alienation in emancipatory activity, there remain contradictions in high-technology capitalism that allow for moments of disalienating practice. The significant emphasis placed on computer-science in contemporary accumulation requires a simultaneous development of skill in digital workers, both unwaged and waged. Alienated from our direction as a species, as with the general forms of alienation relevant in high-technology capitalism, such skill presents possibilities for disalienating technological practices. The failure to direct this skill lies in progressive organizing.

As I’ve argued, active transformation of alienated conditions in the current cycle is multidirectional. Its forms are not determined by the relations of production—not as the accumulation of value nor as reactive forces against proletarian organization, as sometimes conceived. Rather, these moments condition the development of digital-technological forms, just as an active and radical proletarian body invested with technical competency may recodify alienating technology. Key in this, however, is a general recognition of the role critical, dialectical conceptions of technology can play in identifying contradictions in contemporary capitalism and points for technological recodification. This is especially so, if we are to heed Dyer-Witheford’s suggestion (1999, 215 – 216), drawn from Feenberg (1991; see also 1999, 222 – 225) and others, to create new criteria for lines of technological development.

**Conclusion**

Contemporary theories of alienation within Marxian IS are marked by polarization. This is especially so with theories of Marx’s second moment of alienation—estrangement in the process of producing. Fuchs and Sevignani argue that capitalist digital media provides almost none of liberating potential ascribed by its proponents, as its functioning still rests upon a capitalist base. Instead, the alienation of digital labour is similar to the foundational estrangement of capitalism—the separation workers from control over their labour-power—as the pair recall Marx’s dialectical criticism of factory labour from volume one of *Capital*. In doing so, Fuchs and Sevignani fail to address the knowledge of users as a basis for disalienating technological change. User activity is instead mystified, gaining only the appearance of genuine cooperation, when in fact the ever expanding connections provide only value for site owners. For Andrejevic the foundational estrangement of the online economy—estrangement from that which we produce—allows space for capitalist technological codification to deform future activities on the internet. The integration of “possible futures into present behaviour” (Andrejevic 2011, 281), is a corruption of user control, and an example of ideology materialized in the technological mediation of class relations.

 Dyer-Witheford, and Hardt and Negri find commonality here with Andrejevic’s analysis of alienated activity. The estrangement of control, identified by each, conforms to Marx’s discovery of alienation. However, Hardt and Negri’s failure to identify alienated technical codes in the capitalist form of digital technology presents a significant discontinuity with Marx. This is fully realized in Hardt and Negri’s hybridized figure, whose creative power for technological change meets no equivalent estrangement by capital. Although Dyer-Witheford affirms hybridity, his critical conception requires reflexivity in human-technological combinations. This may be a case of affirming the subject-object dichotomy, while ultimately attempting to dissolve it with the cyborg, but the slippage smuggles-in the critical conceptions of technology necessary for anti-capitalist and non-capitalist recodification—for disalienating technical practices.

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1. This is much like the development of alienation within and outside of Marxism more generally. See Marcello Musto, “Revisiting Marx’s Concept of Alienation,” *Socialism and Democracy* 24, no. 3 (2010): 79 – 101. [↑](#footnote-ref-1)
2. Alienation is commonly read to *compel* behaviour, rather than suggest the impellent power of capitalist imperatives. Thus alienation *is* alienated or compelled activity, in one form or another. “The worker becomes a slave of his object,**” as the power over the production process is estranged from its previous holder (Marx 1992, 325). The compulsion to labour in certain ways, to reduce others to abstractions, and accept outside control over our direction as a species, is however entirely compatible with the impelling power behind alienated activity. Indeed, the “Manuscripts” suggest both.**  [↑](#footnote-ref-2)
3. Although Marx makes reference to the terms real and formal subsumption in what we commonly understand as *Capital* proper (1990, 645) and in the *Grundrisse* notebooks (1973, 499 and 690 – 712), their exposition comes in “Results” (Marx 1990b, 949 – 1084), unpublished in English until the 1970s. [↑](#footnote-ref-3)
4. On this point see also Ellen Meiksins Wood, *The Origin of Capitalism: A Longer View*. London: Verso (2002), 95 – 121. [↑](#footnote-ref-4)
5. As Noble will later point out, the Novelist Kurt Vonnegut worked for GE during the early years of his writing career, penning *Player Piano*, at least in part inspired by his time at GE, during the period. Noble 2011, 166. See also Vonnegut, Kurt. *Player Piano*. New York: Avon, 1970. [↑](#footnote-ref-5)
6. Erik Olin Wright champions class compromise with capital as a desirable outcome of contemporary class struggle, what he calls a “*positive class compromise* within capitalism.” Wright, Erik Olin. “Class Struggle and Class Compromise in the Era of Stagnation and Crisis,” *Transform! European Journal for Alternative Thinking and Political Dialogue* 11 (2002): 22 – 44. [↑](#footnote-ref-6)