



Immaterial Labor and Its Machinization

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abstract

This article claims that the real promoters of the recent discourse on immaterial labor have been feminists, which should come as no surprise, given that immaterial labor has traditionally always involved women directly. But, in addition to asserting the beginnings of this analysis as part of the feminist tradition, this article carries out an analysis of immaterial labor in relation to old and new media in the process of the de-materialization of reproductive labor. It also claims that technologies of communication and information have played a crucial role in the valorization process of the domestic sphere and more extensively in the sphere of social reproduction. In the first section of this paper, the concept of immaterial labor is discussed in relation to the domestic sphere. Then the theoretical background of the notion of immaterial labor is analysed. In the final part, the quantitative expansion of immaterial labor in the domestic sphere and its ‘machinization’ are assessed.

Discussing the Concept of Immaterial Labor in Relation to the Domestic Sphere

Let us immediately proceed to a few observations on the concept of immaterial labor, as first elaborated by Marx. In his works we find only some brief considerations on immaterial labor. Marx addresses the concept in the *Theory of Surplus Value* where he provides a secondary, supplementary description of productive labor as labor that produces material wealth. He indicates that it is a “characteristic element of productive workers, that is, workers who produce capital, that their labor produces goods, material wealth” (Marx, 1961: 609), the implication being that those who produce immaterial wealth do not constitute productive workers. Marx continues his analysis by stating that immaterial production can be of two kinds. One which results in material goods (books, pictures, etc.), and one in which the product is not separable from the act of production itself, as is the case of artist performers, orators, actors, teachers, doctors, priests, and so on. But, he adds, “all these manifestations in this field are so insignificant, if we compare them to the whole of production, that they can be completely ignored” (1961: 610-11). Marx’s observations clearly refer only to the labor invested in the production of commodities, as he does not take into consideration, for example, how much of domestic labor is constituted by immaterial labor.

Domestic or reproductive immaterial labor¹ mostly belongs to the second type of immaterial labor as characterized by Marx, i.e. labor that is not separable from the act of production. Examples are care labor, affection, consolation, psychological support, sex and communication. Whereas post-industrial capitalism has brought a quantitative expansion of immaterial production with it (Lazzarato, 1997; Hardt and Negri, 2000), ever-more elements of domestic immaterial labor are also being transformed, shifting from the second type of immaterial production to the first: that is, to immaterial production outside the home, whose products are goods that are acquired and consumed domestically. In fact, in the sphere of reproduction, immaterial labor, while not being inseparable from the act of production, often requires support. Think, for instance, of children's fairy stories, read to send them off to sleep, or toys that serve to sustain their games. These, like other supports, have become increasingly technological devices, by means of which reproductive immaterial labor has been largely 'machinized' and industrialized.

But what part of reproductive immaterial labor has been 'machinized'? Whilst that which is more similar to material labor still tends to resist the process of machinization, it is the less tangible part (thinking, learning, communicating, amusing, educating, and so on) that has been machinized. The reason is that after the development of household appliances in the 1950s in Europe and the US (e.g. the refrigerator, washing machine, vacuum cleaner or dishwasher), no new significant appliances have been developed (except perhaps for the microwave oven in the late 1970s). This possibly signals a resistance on the part of the economic system to produce new innovative technologies specifically aimed at material domestic labor. It seems as if there is still a reluctance towards this potential market. Although very much a mass market, the domestic market is characterized by labor that is unpaid and which produces a commodity that the current productive system holds in increasing disesteem: the human being. Not even 'intellective technologies',² as they are called by Maldonado (1997), have managed to act as a driving force for technological innovation of the material tasks of domestic labor. Much has been said about home Information Technology (IT), of the home re-organized by 'domotics' (Lorente, 2004), thus becoming an 'electronic cottage' (*ibid.*),³ but so far home automation has not advanced much further.

Whilst it may be simple to make a theoretical distinction between immaterial and material labor, it is not so easy in everyday life. In practice, the two are actually closely intertwined. Immaterial labor, as we have seen, often needs supports (tools, technologies) as a vehicle, well-grounded in the material. It needs to be performed in concrete contexts. But, above all, immaterial labor very often sets material labor in motion. Showing one's affection for a person means possibly setting off on a journey, buying a present or preparing a dinner, it means following an immaterial expression with concrete acts.

1 Understood as synonymous for the purposes of this article.

2 In this context, the term 'intellective' is to be understood differently to 'intellectual'. This is because this term refers to machines that are not intelligent in themselves but stimulate intellectual work in their users (see also Fortunati, 2006).

3 These expressions describe the household where information and communication technologies enable the integration and automation of domestic appliances and equipment, enabling the remote control of these applications from inside and outside the home.

At the same time, it must be emphasized that in the sphere of reproduction it is immaterial labor that forms the basis of the whole process. Material production is usually set in motion not immediately, but after the first exchange of immaterial use-values (communication, affect, love) has taken place. For example, when two persons fall in love, they usually go through a period during which they learn to love each other, to express affection and make love. The material part of reproductive labor remains subordinated to immaterial labor. If the labor, exchange and consumption of immaterial use-values works in the relationship, this will initiate the material part of labor and consumption. If instead the immaterial part does not work, the material part will be interrupted, leading possibly to separation. The subordination of material to immaterial labor at the reproductive level may also explain why many couples manage to survive, even if there is an iniquitous division of material domestic labor.

In short, in the domestic sphere there has always been a situation opposite to that which exists in the sphere of the production of commodities. Here, up to the last decades, the most crucial goods had always been material, 'real' labor always material labor, which is why Marx, as mentioned above, understood productive labor as that which produced material wealth. At the reproductive level, on the other hand, the most crucial part has always been the immaterial one. However, once immaterial domestic labor has set in motion the material part, the former becomes less important than the latter. To be able to prepare the food and clean the house, the job of looking after the children has been relegated to the TV set or the computer, in a labor process which is predominantly still carried out by women (Fortunati, 1998: 26). It is as if entertaining children by speaking to them and playing with them has been considered less urgent than getting the dinner ready or cleaning the windows. In other words, it is as if material domestic labor, once initiated, has obtained the upper hand over immaterial labor, sanctioning its secondary nature.

Last, but not least, immaterial labor is carried out to a different degree by men and women and by children and adults: there are those who consume more (children, adult males, the elderly) and those who continue to perform more of this type of labor, namely women (Bonke, 2004). Negotiation over the division of domestic labor continues to be open, even if in the last two decades there has been a kind of stalemate in negotiations between men and women. What I mean by 'stalemate' is that as a result of the decline of the feminist movement in Europe and the US, negotiations between men and women have remained at an individual level. The lack of collective negotiation has meant that the division of labor inside the family has registered very slow progress, whereby in other spheres of everyday life there is stagnation (e.g. with regard to political participation and representation), if not regression (e.g. in relation to women's security). In this stalemate, the spread of new technologies in the home has often been used by men as a way of getting out of doing domestic work, thus establishing a kind of presence-absence in their relations with their partners and children.

The Historical Debate on Immaterial Labor

After Marx, reflections on immaterial labor were developed by Gabriel Tarde (1902) and Werner Sombart (1902/27). Although they never made explicit use of the term ‘immaterial labor’, these two authors clearly contributed to revealing mechanisms and laws governing the wide territories of immaterial labor in Europe at the beginning of the twentieth century. In addition to the notion of natural forces of social labor (such as cooperation) elaborated by Marx as working in an immaterial way inside the production process, Tarde in his two works *Les Lois de L'imitation* (1890) and *La Logique Sociale* (1895), stressed the existence of other forces (or laws) acting on a socio-psychological level, such as imitation, the law of minimal effort, and innovation. In doing so he argued that the social teleology imposed by classical economists unaware of the true foothold of political economics was at fault for the omission of affections, and especially of desire, in analyses of valorization (spheres which were also neglected by subsequent Marxisms). Tarde’s analysis has also influenced Deleuze’s and Guattari’s work (1972/1980), with the realms of fashion, language and conversation in turn drawing the attention of Berger and Luckmann (1966).

Tarde’s concept of ‘imitation’ is important in explaining how social formations are transmitted and overstated: “we are not born similar, we become so” ([1890]1903: 115). Analysing this social force of imitation, Tarde discovered some very subtle mechanisms of social control and dominance of the social body, working at the psycho-sociological level. According to Tarde, ‘imitation’ generally moves *ab interioribus ad exteriora*, that is from inside to outside, the implication being that the imitation of ideas anticipates that of their expressions and that the imitation of aims anticipates that of instruments (Tarde, [1890] 1903: 225-226). Of course, within certain limits this imitation is always bi-vocal, in the sense that there is an inevitable imitation also on the part of dominant classes towards the ‘multitude’, or conquered populations, but this twofold movement does not ever bring about a real reciprocity (Tarde, 1890[1903]: 233). Furthermore, dominant classes sometimes imposed Sumptuary Laws⁴ in order to discourage this imitation.

Tarde makes us reflect, for instance, on the complex situation in which consciousness of one’s social status or class operates. While the working classes might have a strong class consciousness, it can be weakened by the social tendency to imitate dominant classes. Copying the clothes, furniture or entertainments of another class, means to have already appropriated their feelings and needs, of which these goods are exterior manifestations (Tarde, [1890]1903: 216-17). The imitation of dominant class attitudes and behaviour is a sign of the fact that their political and cultural dominance is accepted. For instance, the 1960s in Europe and the US signalled a complete turnover of this social mechanism, when the working class and students began to refuse this

4 “Sumptuary laws (from Latin *sumptuariae leges*) were laws that regulated and reinforced social hierarchies and morals through restrictions on clothing, food, and luxury expenditures. They were an easy way to identify social rank and privilege, and were usually used for social discrimination. This frequently meant preventing commoners from imitating the appearance of aristocrats, and sometimes also to stigmatize disfavored groups. In the Late Middle Ages sumptuary laws were instated as a way for the nobility to cap the conspicuous consumption of the up-and-coming bourgeoisie of medieval cities” [http://en.wikipedia.org/wiki/Sumptuary_law].

imitation and proposed themselves as the model to be imitated by dominant classes (Polhemus, 1994). This role reversal is a milestone in the recent history of class relationships, because, if we accept Tarde's interpretation, it means that dominant classes have already accepted at least at the cultural level, the dominance of the multitude. Tarde moreover, reflects on values as an immaterial engine which moves society and steadies it. With this proposal, he distinguishes two classes of goods or values:

The former [are] of an individual nature, such as the pleasures of senses, and the latter of social nature, such as consideration, glory, honour. The former as well as the latter values might become, along their diffusion, the main objective of a society, even if it is only the latter values of course which produce the fullness and strength of social cohesion. (Tarde, [1890]1903: 490)

Furthermore, Tarde used to the concept of 'innovations' to explain how social aggregations could produce differences. He worked not only on the social role of innovation, seen as a very crucial element of the valorization process (for him capital is increasingly accumulated inventions), but also on the way in which innovation spread throughout society. His analysis provided the basis for the diffusion of 'innovations theory', formalized in 1962 by Everett Rogers in *Diffusion of Innovations Theory*.

During the same period, Sombart in his book *Modern Capitalism*, put forward the idea that capitalist labor increasingly involved immaterial labor and social forces of various types, such as the drive towards the infinite, trust in progress, the formulation of a specific modern notion of duty, originally sustained by religion, and the emerging love for one's own work (Sombart, 1902/27: 520-21). Furthermore, he analysed the deep transformation that capitalism had produced with regard to the social acceptance and appreciation of inventors and technical invention as indispensable premises to the scientific development of technology and its use in the production process. Sombart depicted how the extraordinary development of technological inventions was due at least to three factors: first of all, the objectification of technical knowledge, which ensured a continued control over new ideas or inventions, their transmission and with it the diffusion of knowledge; secondly, the systematization of technical knowledge which allowed for a systematic progression of knowledge and its enlargement; thirdly, the mathematization of technical knowledge (1902/27: 577).

Sombart also succinctly analysed the development of the organizational apparatus of the capitalist system at the beginning of the 1900s, which had started to utilize immaterial labor constituted by inventions and scientific knowledge, as well as new techniques and procedures of selection and specialization. Amongst the processes he analysed was the development of economic rationalism, which he saw as "the increase of intelligence, knowledge, and abilities to apply this energy in the most efficient way" and on the increasing need of intelligent workers to use complex machines (1902/27: 517-518, 534). He also analysed the objectification of knowledge, the 'science' of bureaucratic organization and accounting, the training and specialization of workers and the rationalization of professional selection, which was predicated on the attempt to establish an exact measure of the psychological abilities required for doing different jobs (1902/27: 699/789-90). Finally, he examined the effects that this apparatus had on social reproduction and in particular, the specific strategies employed in this sphere. These included a de-personalization process among human beings at the social level,

through the strengthening of a schematism (that is, a system of norms, ordinances, conventions, rules and agreements) in which the typical elements of interpersonal relationships are fixed (1902/27: 447), whereby the uniformity of social needs is based on the dependence on fashion (1902/27: 766). He also examined the shifts in perceptions of time and space as social categories moulded to this new logic (for instance, producing an acceleration of rhythms of work, distribution and consumption, but especially of life itself) (1902/27: 515-16). In substance, Tarde and Sombart show how capitalism advanced through the development of immaterial labor. However, because the domestic sphere remains absent within their analyses, they are not able to fully comprehend the function, role and meaning of immaterial labor in individual and social reproduction.

More recently, a variety of scholars have contributed to the concept of immaterial labor, thus discovering the productivity of social reproduction: from Becker, who launched the debate on 'human capital' (Becker, 1964), to Foucault who talked about 'biopower' and 'biopolitics' (Foucault, 1976), and from Deleuze and Guattari who theorized human beings as 'desiring machines' (Deleuze and Guattari, 1972, 1980), to Bourdieu, who coined the terms 'cultural' and 'social capital' (Bourdieu and Passeron, 1970; Bourdieu, 1980). But this debate, which developed in relation to aspects of the immaterial and the sphere of the individual, I argue, completely ignored the material labor of the domestic sphere (cleaning the house, cooking, shopping, washing and ironing clothes) and above all, ignored the labor done in order to produce individuals (sex, pregnancy, childbirth, breastfeeding and care), as well as the other fundamental parts of the immaterial sphere (affect, care, love education, socialization, communication, information, entertainment, organization, planning, coordination, logistics).

Becker (1964) argued that education, training and knowledge in general are crucial factors for the productivity of individuals and nations and used the term 'human capital' to indicate the importance of these elements for valorization. According to him, in advanced societies human capital would represent 80% of any Gross Domestic Product (GDP). Human capital develops from family efforts and public investments in the education system. But talking generically about 'family' prevented him from recognising that 'human capital' was produced by means of unwaged labor, that is housework, which produces not only education and knowledge, but also the whole subsistence of new generations, including their existence, their birth and bodies. For the discourse on valorization to be complete, it should include all of this labor too, not just the segment of education. Foucault (1976) also analysed the social mechanisms that allowed for the control of the social body and elaborated the concept of 'biopower'. In the eighteenth century, biopower developed in two directions: in the beginning, in the direction of 'anatomy-politics' which aimed at introducing practices of discipline and education among individuals, and later on in the direction of biopolitics, which aimed at controlling populations, as machines to produce wealth, goods or other individuals. Especially in the second half of the century, according to Foucault, a series of debates emerged around habitat, the material and social conditions of urban life, public hygiene and changes in the relation between birth-rate and death-rate. According to the French thinker, it was clear that for the capitalist state, regulating population flows became a power issue, whereby sex became a fundamental political element for transforming society into a machine of production.

Deleuze and Guattari (1972, 1980) also analyzed many aspects of immaterial labor such as the production of innovations, values, social relationships, affects and thinking processes, but they were much more interested in deconstructing notions, concepts and habits rather than building a systematic analysis of immaterial labor. Their work aimed more at liberating forces for a critical vision of ‘political doing’ and an imagination of ‘anti-power’. With a strong sense of the moment, they proposed to social movements of affluent societies to focus on desires, while the culture of the working class until then was talking only about needs. Finally, Bourdieu (1986) introduced the notion of cultural capital, seen in three forms: the embodied state (culture), which is connected to the body, thus presupposing embodiment; the objectified state (cultural goods) and the institutional state (academic qualifications). As part of this work, he accused economists of neglecting the domestic transmission of cultural capital. In addition to this, also proposed the concept of ‘social capital’, made up of “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (1983: 249). Especially this second notion of ‘social capital’ (which is later taken up by Coleman (1988) and Putnam (2000)) was a new opening towards considering social relations as something connected to capital and its valorization. But this definition in itself, I argue, is incorrect, because it refers to a kind of capital that belongs to individuals, whereas social relations and contacts represent one of the territories of the immaterial production that belong to the reproductive sphere, a means of valorization for capital.

In the last decades, the true promoters of the discourse on immaterial labor have been feminists, which is not surprising given that traditionally, a large section of immaterial labor has been domestic labor and caring, traditionally performed by women. In the early seventies, at the height of the feminist movement, a group of women who called themselves Marxist feminists began a more in-depth study of capacity of the Marxist categories to explain the condition of women (see for instance, Dalla Costa M. and James, 1972; Dalla Costa, F., 1978; Federici, 1980). In the second half of the seventies there was an attempt in Italy to produce a systematic theoretical analysis of the process of reproduction (domestic labor, nurturing and prostitution)⁵ in respect to and beyond the Marxist categories (Fortunati, 1981). While Marx clearly saw the domestic sphere as an unproductive sphere, we saw the production of goods and services (prostitution included) as a crucial stage inside the whole process of production and reproduction. The productivity of housework and prostitution was understood as producing and/or reproducing the commodity most precious for capital, the labor force:

Large areas of domestic labor cannot be socialized or eliminated through the development of technology. They can and must be destroyed as capitalist labor and liberated to become a wealth of creativity unchained from the yoke of exploitation. The reference here is to immaterial⁶ labor (such as affection, love, consolation and above all sex) which among other things constitutes an increasing part of domestic labor. (Fortunati, 1981: 10)

5 Prostitution refers here to labor that “attend[s] to the sexual desires of a particular individual (or individuals) with bodily acts in exchange for payment of money” (Zatz, 1997: 279).

6 *L’Arcano della riproduzione* [The Arcane of Reproduction] was published in Italy in 1981. It was translated into English and eventually published by Autonomedia in 1995. At that time the Italian term ‘*immateriale*’ was translated as ‘non-material’, probably because the term ‘immaterial’ was not at that time used within the English language.

This passage is part of a critique of the Leninist strategy for the emancipation of women, which advocated the socialization of domestic labor through the development of social services, and called for women to obtain employment outside of the home. In the 1970s, the feminist movement had already recognized that immaterial labor was a relevant part of the process of reproduction and had given the concept a wider definition. This recognition was based on the fact that, while the factory was still solidly centred on material labor, an analysis of reproductive labor immediately revealed the existence of immaterial labor. In the sphere of the production of commodities, the limited amount of immaterial labor that existed was identifiable essentially at the bureaucratic-organizational level, and at the level of social reproduction (Caffentzis, 1996), as well as in the introduction of mass media and the growth of education sector. In contrast to these areas, within the domestic realm, immaterial labor was much more widespread and made up of many elements such as education, communication, information, knowledge, organization, amusement/entertainment, and specifically, the supply of love, affection and sex.

Calling the act of supplying of love, affection and sex a 'job' was in many ways a major theoretical challenge. Until then, only prostitution had been in some way considered work, even if there were still echoes of the Marxian anathema qualifying prostitutes as unproductive 'rabble'.⁷ This anathema sprang from the consideration that the work done by prostitutes is configured as a mere consumption of income which is included in 'simple circulation', not in that of the circulation of capital.⁸ At that time, love, affection and sex in the domestic sphere were considered more or less activities naturally congenital to human beings.

Recently, Hardt and Negri (2000) have taken up the concept of immaterial labor. They argue that

Most services indeed are based on the continual exchange of information and knowledges. Since the production of services results in no material and durable good, we define the labor involved in this production as *immaterial labor* – that is, labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication [...] The other face of immaterial labor is the affective labor of human contact and interaction [...] This labor is immaterial, even if it is corporeal and affective, in the sense that its products are intangible, a feeling of ease, well-being, satisfaction, excitement or passion. (2000: 290/292)

This definition by Hardt and Negri, inspired in part by the feminist tradition, is not sufficiently coherent. In fact, in another essay, *Kairos, Alma Venus, Multitudo*, Negri seems to argue the opposite:

7 Discussing productive and unproductive labor Marx in the *Grundrisse* (1968: 252) exactly writes: "Since one of the contracting parties does not confront the other as a capitalist, this performance of a service cannot fall under the category of productive labor. From the whore to the pope there is a mass of such rabble".

8 Marx differentiates between 'simple circulation' and the circulation of money as capital: "The simple circulation of commodities begins with a sale and ends with a purchase, while the circulation of money as capital begins with a purchase and ends with a sale. In the one case, both the starting point and the goal are commodities, in the other it is money" (Marx, [1876] 2000: 484).

But if we wish to determine the current conditions of the teleology of the common, it is not so much necessary to understand the resignation of capital from the role of productive force, but above all to understand the intellect's accession to the status of sole producer of value. This dynamic of the intellect was explained above, when the brain was acknowledged as the sole tool of postmodern production. ([2000] 2003: 227)

This statement seems to emphasize that Negri does not actually grant affects, sex or emotions a true role in postmodern production, which contradicts what Hardt and Negri say with regard to immaterial and affective labour in the passage quoted previously. This secondary treatment of affects, sex and emotions is further reinforced by the fact that the first example of immaterial labor they provide in *Empire* is health care services and entertainment (2000: 292). Only after this do they refer to 'women's labor' as defined by feminist analyses. Their argument is that an understanding of 'affective labour' must begin from 'women's work' or 'labor in the bodily mode', but that this labor, is immaterial (2000: 293). However, it remains unclear here how 'affects' are conceptualized, and by whom and in what kinds of social relationships they are produced and consumed. The overall consequence of their discourse is that women again risk being reduced to the body.

Many other women (and men) in these past thirty years have continued to study the transformations of domestic labor and especially its immaterial elements (see for example, Hochschild, 1983, 2004, 2005). Today, the recognition of domestic labor and its immaterial elements as productive labor able to create surplus value, is widely shared, meaning we can turn our attention to other aspects. One important aspect of domestic labor is the process of the de-materialization of reproductive labor, which we can understand through an analysis of the role of old media (newspapers, TV, telephones) and new media (computers, the internet, mobile phones). The time saved through the diffusion and adoption of domestic appliances has been filled up by an increasing labor of housework organization and planning, micro-coordination of the various family members and their personal schedules and commitments, planning of childrens' transportation, the logistics of the flows of goods and people within the house, knowledge and information activity aimed at the development of 'informed' housewives/workers, and the adoption and use of Information and Communication Technologies (ICTs) in order to remove the human body from education, communication, information, entertainment and other immaterial aspects of domestic labor.

The Increase in Immaterial Labor

After *The Arcane of Reproduction*, which, already in 1981, emphasised the tendential quantitative expansion of immaterial labour in the reproductive sphere, many other studies have highlighted this same tendency in the whole capitalist system of the most industrialized countries (Haraway, 1991; Lazzarato, 1997). Immaterial labor has spread like a virus to the whole economic system, whereby the dynamics that govern the reproduction of the labor force have been exported (Hochschild, 1997). This is because this is the only way to produce a labor force adapt to the complexity of the post-modern world of globalization. It was carried out through through the extension and

intensification of the working day, by making people consume television, cinema, the internet, mobile phones and computer games for the purposes of communication, information, education (e-learning), knowledge and organization. This has happened through machinization, but also through other mechanisms of social control and management of social representations. In the production of material goods, where processes like computerization, the rapid implementation of technological innovations, and the increasing importance of information have quickly taken hold, not only has immaterial labor spread, but so has precarious labor. Immaterial labor has become productive for capital in a way that signals a wider phenomenon which is the exporting of the logic and structure of the domestic sphere to the world of goods, which always ends up resembling and being assimilated to the reproductive world.

In the following part of this article, I wish to focus on one question that pertains to this development: why has the immaterial part of domestic labor grown so much? It has done so, on the one hand, owing to a thrust from below, and on the other, due to the initiatives of the economic system. As for the first aspect, in the 1960s and 1970s, the activity of strong mass movements on the political scene had redescribed the modes of social relations, refusing the disciplining and command imposed upon the labor of workers, students, women and youth. This cycle of social struggle conquered wide areas of self-determination in the sphere of feelings, affections, sex, education and so forth. Criticism of authoritarianism, the interjection of a new respect for childhood, widespread experimentation with sex by the younger generations, the new domestic and social role of women, were all elements that placed family and social hierarchies in difficulty, recovering new forms of solidarity and defeating old modes of hostility. With regard to consumerism, the development of a strong mass market furthermore contributed to the construction of new kinds of media which had to cater for the needs and desires of the mass man and woman and speak their language. Last of all, the fact that the majority of families now had a house of their own and money in the bank enabled workers stronger bargaining powers. For the first time, people were not so vulnerable with regard to employment. Therefore, there existed now within the labor market people who could count on a certain level of well-being, having had very comfortable upbringings and spending their early years of adolescence in new forms of sexual and affective freedom. In other words, ungovernable workers (but also buyers, customers, consumers, users, audiences and so on), who forced the industrial and economic system to radically change its style of command, forms of organization, and modes of cooperation. The formation of complex social workers could have been metabolized by the economic system if only this formation had not been turned against it (see also Codeluppi, 1995; Gallino, 2000; and Pianta, 2001).

But this further development of immaterial labor also provided the means for a political response by the capitalist system to the cycle of social struggles of the 1960s and 1970s. Apart from launching a powerful attack against people by intensifying the rhythms of labor and increasing social complexity (due to the heightened levels of mobility, urbanization, urban logistics, etc.), capital took the initiative to reorganize certain problematic areas in families by industrialising them. These problematic areas arose due to the consequences of two factors that had existed for some time, but which at that time took on an important role. The first factor was the increasingly massive extension of waged work to women, which gave them a certain (limited) economic autonomy, although they found themselves involved in a double occupation: house and waged work. Many areas of immaterial domestic labor, such as caring for children and dedicating time to their education or looking after the elderly, had been notably compressed or had even been left

unattended. The abandonment of strategic areas of immaterial labor was due on one hand to womens' inability to continue to guarantee their families the same quantity and quality of domestic labor, and on the other, to their refusal to go on doing unpaid work. The second factor that had contributed to opening up areas of distress in domestic life had been men's resistance to taking over those areas left unattended by women, i.e. tending to domestic chores. This widespread male behaviour was to be found as one of the reasons for the increasing of separations and divorces that followed (Barbagli and Saraceno, 1998).

The grand offensive of the economic system was to produce machines that would supply services to replace at least in part the immaterial domestic labor that was no longer carried out, or that had been compressed. For the first time, the worker masses found themselves in possession of means of immaterial (re)production. Certainly, these 'intellective' machines such as radio, television, computer, internet, telephone and mobile phone were still 'primitive', given that, apart from the telephone and the mobile phone, they were unidirectional or weakly interactive. Nevertheless, their potential should not be underestimated. However, the most important aim of the economic system was to ensure in some way that this mass machine consumption would always remain dependent on the needs of the market, and productive for the system itself (and unproductive for consumers). The ensuing increase in the amount of immaterial consumption (which, by the way, in the domestic sphere is an integral part of the work process)⁹ is proof of the productivity induced by the machinization of immaterial domestic labor.

In the reproductive sphere, the development of immaterial labor was characterized by two phases, but with the same aim: to exercise strong control over the sphere of social reproduction through old and new media. In the first phase this aim was pursued by creating and spreading new models of masculinity and femininity and commanding over the rhythms and sites of domestic labor and care. In other words, initially intellective machines were fundamental aids to restore the supply of high levels of valorization in the immaterial reproductive sphere. In a second phase, this aim was pursued not only by continuing to expropriate the productive and reproductive capacity, but also by expropriating individuals from reality itself, making them live out a mediated reality. In this second phase there was a great leap in the mode of exploiting and controlling people, which aimed at intensifying the production of value in the domestic sphere. So there was an unprecedented offensive on the part of the capitalist system, which no longer turned its desire for exploitation only to the capacity for labor – content – but also the body – its container.

The diffusion and use of these intellective machines has had the effect of extending the immaterial domestic workday. The modes in which immaterial labor time has been lengthened are easy to list: while interpersonal communication is flexible, because it varies according to the moment, the argument, its aim, the functions and the kind of relationship existing between interlocutors, the temporal modules of media products, are quite long and inflexible. A film, for example, requires around two hours for its complete fruition, a news programme half an hour. In contrast, if I want to relax with a friend, have a conversation, laugh together, this might last half an hour or an hour or two hours. The time is not fixed. The regulation of the time depends on us. We stop

9 For a further discussion of this, please refer to Fortunati ([1981]1995: 69-89).

when we have had enough. Even reading a book is flexible. I can read the book for ten minutes before going to sleep, or for an hour on the train to work, or for two hours on a Sunday afternoon. It is up to me. Cinema and television disciplines our time much more rigidly: we are obliged to dedicate two hours if we want to see a film. It is up to the producers to decide the duration of the consumption, not us. It is these modalities imposed by the dynamics of supply that draw out the time dedicated to communication, whereas the intensification of the immaterial domestic labor day has been created by the increasing overlapping of the actions and obligations that we find in daily life: we drive and listen to the radio, we eat, we chat and follow the news, we phone and we water the plants, or we iron.

The mass media and the new media are devices that are very different from household appliances, the widespread use of which helped to reduce effort and time in some household chores. Unfortunately, after the first wave of household appliances, technological innovation on the material domestic labor front has come to a halt. Instead, intellectual machines have spread in great numbers and variety. As a result of the spread and use of the mass media and ICTs as power-centred authoritarian ‘monotechnologies’ (Mumford, 1996), immaterial labor has become increasingly mediated, self-reproductive and self-disciplinary. Rosalind Williams (1998) is right when she maintains that women basically had to endure, at least until the late 1990s, the capitalist and male initiative of life-denying technological systems.¹⁰ It is no accident that while the classic household appliances were aimed mainly at women, the new media made of “sand, glass and air” (Gilder, 1996) apparently ecumenical, were for a long time aimed especially at the young and male area of consumption. Access to these technologies by members of the family reflected the hierarchy of power as well as the division of and cooperation in domestic labor within the family itself. Life cycles and interpersonal dynamics also affected how these technologies were used (personally, collectively, in turns, and so on), as well as the age at which they were taken up or abandoned. On the whole, the development of the machinization of immaterial labor through the spread of old and new media on one hand strengthened, and on the other distorted, reproductive labor. In particular, the use of new media has been amplified by the fact that, differently from old media, there is less mediation here by a gatekeeper responsible for the entire process (e.g. a parent controlling what a child watches on television or who they communicate with over the household telephone).

The ‘Theft of Reality’

In general, with the spread of IT and communication technologies, individuals have increased their acquisition of services to “construct a common social world through communicative interaction, putting it to work in generating economically valuable outcomes” (Arvidsson, 2006: 675). An analysis of immaterial labor cannot fail to also look at traditional mass media editorial groups and new media operators, manufacturers

10 When instead women historically were crucial in shaping democratic techniques especially in agriculture and horticulture, or ‘biotechnics’ (Mumford, 1996), true polytechnics, that is, life-centred technologies.

and service providers, and at the new culture industries (Power and Scott, 2004), or 'creative industries' (Florida, 2002; McRobbie, 1999), that is, contemporary industries producing symbolic meanings, images, music (see Reich, 1991). In the so-called 'IT model', a growing number of immaterial workers not only work with communication, information, sociality, imagination and knowledge, but also need and intensively consume immaterial labor such as affection or psychological support (Kakihara and Sorensen, 2002).

The result is that the use of these intellectual machines as life-denying technological systems has in fact led to not only the lengthening and intensification of immaterial domestic labor but also the 'dematerialization of the real' and, more exactly, to its 'theft'. The dematerialization of the real has been a consequence of the alienation brought about by the mass diffusion of old and new media. How else can we explain the interest with which, for instance, while we are having lunch, we follow the news about what is going on in Iran, possibly telling our child to be quiet, and not asking what sort of day they had at school. Aren't the many hours of the day spent in front of the TV screen or surfing the internet or listening to the radio, hours in which we live out a second-hand reality, often narrated by mediocre narrators? Isn't the end of the grand narratives (Lyotard, 1979) not accompanied perhaps by this increase of the everyday mediated by *mauvais maîtres* (Popper, 2002)? Once again, exactly the opposite has happened in the domestic sphere to what has happened in the sphere of the production of commodities. Here, the alienation of workers has been pursued through the expropriation of their means of production. In homes it has been achieved through the opposite method, making available formidable devices of entertainment and social control, the contents of which are constructed by the immaterial labor industries. Much attention on the part of scholars has been quite rightly spread over the study of the contents of TV and radio programmes. It is important to study the content of messages because they can have a great impact on the user. But, apart from the contents, the aspect that is even more relevant is the effects themselves that the use of the device causes (Silverstone and Hirsch 1992; Silverstone, 1994). By means of the device, people actually are expropriated of large slices of life in order to live out this second-hand reality. The real leap produced in this stage by the system of capital is that it has gone from exploiting the labor force to expropriating the labor force of its very reality (Fortunati, 2003).

So, to have machinized not the part of immaterial labor bordering on material labor, but its less tangible part, namely language, communication, thought and the imaginary, has meant in fact not only the lengthening of the time of consumption/production dedicated to this element of immaterial labor, as well as its intensification, but also the dematerialization of the real. Let us add another example: the shift of large quantities of romantic and sexual human relations in the mediated imagination, in a more or less interactive way (Arvidsson, 2006). For sexuality, this process of machinization has selected only the erotic fantasies (Lane III, 2001), communication and information, (Liu and Lau, 2006) or dating (Arvidsson, 2006), leaving aside the actual practice of such interactions. By machinising the more ethereal part of immaterial labor connected to sex, it has even more radically broken the chain of thought, of sexual saying and doing. Today we are assisting in the development of a great industry of erotic imagination detached from practice that recognizes more or less implicitly the 'freedom' to consume

it as a commodity. At the social level the effects can only be negative, given that the immaterial part of sexuality has developed in such a preponderant way, detached from material doing, as to make this latter more and more problematic. The feminist battle against considering masturbation as an asocial or even antisocial danger has been transformed not into complete and healthy sexual activity but into a kind of powerful urge towards a mediated erotic imagination often forced inside violently anti-woman canons (Arvidsson, 2006). In this new context the mediated erotic imagination has become violent and masturbatory, reflecting another aspect in which the narcissistic society expresses itself (Lasch, 1978). This transformation of material labor into immaterial and mediated labor has meant a strong vampirization and pauperization of the quality of the erotic life. In compensation, for the pornography industry it has meant an extraordinary growth of revenues which, according to Lane III (2001), was estimated at the beginning of this millennium at 20 billion US dollars. The same has happened to the body and beauty industry (clothes, make-up, surgery, fitness, dieting), or the industry of the 'online ghosts of sociability'. What I mean by this expression is that there is a use of the internet which reinforces socialization, and another that substitutes co-present socialization and perhaps distorts it. There are many types of web services such as chats, where people converse without building true relationships, or websites where people display their opinions without actually interacting with anyone. In this way people remain separated from others, each person in his/her room in front to a computer. Another crucial area that has been sucked out of the home and commodified in response to these very exposed areas of domestic labor is education, increasingly machinized at home but also exported in the social area of services where state control is easier. Social services in this type of society serve to guarantee the standardization of educational process, the assessment of the amount of knowledge and discipline embodied by new generations.

In general, the commodification of the less tangible elements of immaterial labor has also had the effect of redimensioning the process of decision and self-determination in the reproductive sphere. The industries and technical systems that have developed by starting from the exploitation of these areas have begun to dictate their rhythms, modes, places and contents of a disciplined and controlled consumption, substituting the individual pre-existing modalities of production which, within certain limits, were more free. Individuals, but more extensively families, have been increasingly made mere appendices to communication and information technologies. Furthermore, ever since the cultural or ICT industries began to produce these immaterial goods and services, in order to be freed from certain parts of immaterial domestic labor, and/or to strengthen what was left for them to do, people have also been obliged to pay for these goods and services. By buying these goods, people are doomed to reproduce in an increasingly unproductive way for themselves, and increasingly productive for the economic system.

Strategies of Survival and Self-determination

If the capitalist initiative is strong, equally strong is the multitude's initiative with respect to immaterial labor. The fact that people possess at a mass level a whole series of communication and information technologies and have become better at using them

for themselves, is setting in motion powerful processes of self-determination and hence of self-valorization. It is enough to remember, for example, how mobile phones have played a crucial role in many public demonstrations and social movements, but also within public solidarity chains (Fortunati, 2003; Rheingold, 2003). Or how users have not only reconfigured technological devices through using them, introducing many novel aspects, but have also obliged manufacturers and telecommunications companies to reconfigure themselves and accept these users as codesigners of new services and functions; how much the web has served as a space for public debate, or how much it serves also to redefine knowledge, its composition, the mechanisms of its production, and its modes of transmission. The alternative use of new media is crucial for the new political subjects. In fact, for them the possibility of implementing an effective strategy of self-valorization passes through the invention of a new theory of communication, as well as a new theory of organization, of new tools, procedures and communicative styles.

Nevertheless, it must be clear that machinization has been an important but by no means the only development as far as the abandonment of immaterial domestic labor is concerned. The other response has been the changes in the way that social services function. For example in Italy, no longer is it the case that elderly people can only be cared for in the hospitals or old people's homes. Increasingly, care services are more individualised in that social services provide care in the home. At the same time, there has been another response from below which has taken on the shape of a survival strategy for many upper middle class families, and increasingly the lower middle-classes: the resort to domestic labor outside the family. The double-income urban family, because of the increasing intensification of labor rhythms and mobility, has found itself no longer able to look after its more dependent members: children and the elderly. In Europe, in a number of families today, one part of the material and immaterial domestic labor is done by immigrant women (Anderson, 2000). Again, the contrary has happened for housework to what has happened in the sphere where commodities are produced. Here, material labor has been delocalized, that is, exported towards countries where the labor force costs less.

Conclusion

An attempt has been made in this article to reconstruct the historical and theoretical debate over the concept of immaterial labor. The intention has been to develop an articulated reflection on the concept of immaterial labor from a feminist perspective. I have tried to examine the increase in immaterial labor especially in the domestic sphere as a result of the increase in old and new media. This analysis has exposed the dematerialization of reality, but also some strategies of self-determination that people have initiated. The mass possession of these intellectual technologies represents an important ground for political experimentation and for a new theory and practice of communication, as well as a strategic moment of self-valorization.

Elsewhere, I have attempted to show how the mind is forced to develop in the 'Global North' and the body in the emerging countries, where factory production, i.e. material

labor, has been located to. In the ‘Global North’ there remains more immaterial labor (Fortunati, 2003). Globalization separates the material elements from the immaterial ones of the same production process. The latter very often remains in the (post-)industrialized countries while the former is located in developing countries, which brings the international division of labour to another level. Planning, research, strategic organization, innovation and creation of new products within multinationals and other enterprises generally remain in the former. This tendency is of course increasingly contested by developing countries, which are becoming not only more autonomous in managing production processes but are also developing themselves as technological innovators (see China, India, South Korea). With regard to the old division between manual labor and intellectual labor, or rather between material labor and immaterial labor, a more subtle division is being established today, which does not limit itself to distinguishing between them, but which places them in opposition to one another. Material labor is scorned and devalorized, while immaterial is valorized. But it is on the body that the system has launched its most radical attack, even if there has still been no political awareness of this attack. Centuries away from the *Habeas corpus* Act of 1679, globalization is moving from an exploitation of the labor force as work capacity towards the command and control of the whole machinized body (Haraway, 1991), a control that, differently from before, can be exercised directly in a continuous cycle. Given these premises, there is no longer much sense in speaking of a technical collocation inside the productive cycle, as everyone, without exception, is subjected to the process of the machinization of the body, increasingly hybridized by means of machines. But it continues to make sense to speak of class difference, because it is among the folds of a lack of solidarity among the various political subjects that globalization’s command passes. In any event, the offensive has now passed into women’s hands.

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