



## General Sentiment: how value and affect converge in the information economy

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**Abstract:** The Fordist economy was marked by what David Stark calls a Parsonian Compromise in which economic value and other values were clearly separated, in theory as well as in practice. Today this is changing. Trends such as Ethical Consumerism and Corporate Social Responsibility are on the rise. More fundamentally, the economic importance of intangible assets like brands has increased. Together these developments testify to a new role for a wider range of values in determining price formation. In this paper I will argue that this trend has two principal causes. First, the socialization of production has increased the importance of affective investments in things like brands, reputation, corporate culture and efficient teamwork as sources of value. Second, a common criterion for the measurement of affective investments is forming, based on the new abstract or General Sentiment that is emerging as a new 'general equivalent' as a consequence of the present remediation of communicative relations, primarily throughout the diffusion of social media. Together these two dimensions make up the foundations for a new value logic, an 'ethical economy' that is emerging within contemporary wealth creation. After briefly summarizing the first argument, this paper will concentrate on the second, describing the emergence and features of General Sentiment as a criterion of value. The conclusion will suggest possible consequences of this development in both practical and theoretical terms.

**Keywords:** value, general intellect, affect, General Sentiment, information economy

### Introduction

'Wealth Management Group' uses the Values Tool to identify the values profile of client portfolio holdings in order to measure alignments with the value profile of clients. . . . What is of great benefit here is that relationship managers do not need to depend purely on their own judgement to identify their clients' values, but are assisted by a powerful technology. (Sales Document from small internet startup addressing a large wealth management group<sup>1</sup>)

. . . hence exchange value must cease to be the measure of use value. (Marx, 1973 [1939]: 705)

The modern, Fordist economy was organized around what David Stark has called a 'Parsonian Pact', by means of which 'value' and 'values' were kept separate (Stark, 2009: 7).<sup>2</sup> For social theory, this meant that concerns about values and questions about the origins, desirability or legitimacy of preferences and motivations were considered to be outside the object domain of economics. At the same time, the question of how economic value was formed was considered beyond the reach of the disciplines like sociology and anthropology that studied 'values'. More importantly, it also applied in practice: the main criterion for the objectification and measurement of value that applied throughout the Fordist corporate economy was a notion of productive time that was considered to be devoid of any affective dimension. While there were of course alternative 'voices' within the vast corpus of modern managerial thought – including, notably, the Hawthorne Studies and the tradition of Human Relations Management that arose out of them (Roethlisberger and Dickson, 1939; cf. Rose, 1975) – the basic principle of modern cost accounting, and the Taylorist managerial system of which it was part, was the organization of productive relations so as to render them measurable in terms of standardized productivity rates. These rates paid no attention to the mess of emotions, opinions and social relations that make up the reality of concrete everyday work. This was not just a question of measurement systems abstracting from the affective dynamics of work life, but also of management philosophies actively trying to contain forms of affect within the boundaries of a pre-structured job description. As Alan Liu argues, the creation of 'abstract labor time' (to use Marx's expression) as the principal criterion of value measurement involved 'a complete system of emotional labor management that disallowed workers any "productive" emotion at all' (Liu, 2004: 94; cf. Gramsci, 1971). While such attempts at emotional governance probably never succeeded in completely purging work-life of undesired forms of affect – indeed the argument has been made that Fordist, bureaucratic organizations actually gave greater space for unstructured forms of sociality than today's post-bureaucratic organizations (du Gay, 2000) – the intention to do so was central to Fordist managerial thought.

Today it seems that this 'Parsonian Pact' is in the process of being overcome. Phenomena such as Ethical Consumerism, Corporate Social Responsibility, Fair Trade, and Socially Responsible Investment (Vogel, 2005; Stehr *et al.*, 2006) testify to a will to allow affective concerns to influence the prices of assets and consumer goods, enabling value decisions about the legitimacy and desirability of the goals that guide economic pursuits to enter the picture. Beneath these trends lies a deeper structural tendency in which so-called intangible assets and brands in particular, have become ever more important as components of the market value of companies.<sup>3</sup> Like many other intangible assets such as 'knowledge capital', 'reputation' or 'corporate identity' – the terminology is diverse and ill defined in this field – brands represent the pricing of a wide range of affects, such as the experience that consumers and, increasingly, other actors such as employees attribute to a brand. This might include the perception of a brand's 'fairness' or social utility, or the loyalty that it is held to inspire.

The contemporary tendency towards the fusion of ‘values’ and value may to some extent be driven by pressure on corporate actors as a consequence of the growing strength of a new, networked public sphere, in which consumers and other actors can find new ways to express concerns that are related to diverse orders of worth, such as environmental sustainability and social justice (Garriga and Melé, 2004). However, this article will claim that the main reason behind this development is that the corporate economy itself has opened up to the inclusion of such diverse orders of worth by means of the calculative devices that it deploys to determine value. This opening up has occurred through the rise of ‘intangibles’ as a new paradigm for calculating the value of assets and consumer goods. In turn, the rise of intangibles has been driven by two developments. First, a transformation of productive relations has decreased the representativeness of ‘the productivity of time’ as a criterion for the measurement of value. Second, there has been a development in the objectification and measurability of affect, which has enabled affect to enter into the calculative devices by means of which economic values are set.

Drawing on Gabriel Tarde among others, I will suggest that this ‘becoming objective’ of affect has a long history that goes back to the origins of the modern, mass-mediated public sphere. But this trend has accelerated in recent years through the proliferation of social media together with a host of new technologies including, primarily, data mining techniques such as network and sentiment analysis, that are able to represent individual affective investments as manifestations of an abstract general equivalent, what I call General Sentiment. I will suggest that these techniques, and the General Sentiment that they are able to represent, contain a new possibility for the stabilization of affective value, something that has so far been lacking in measurements of intangible value. The final section will draw out some tentative conclusions about the possible consequences of these developments for politics.

Before telling that story, however, it is necessary to give a brief description of the transformation of productive relations that have made values valuable and, consequently, such measurements desirable in the first place.

## **Linking value and affect – the rise of intangibles**

What is value? Classical economic and social theory has attempted to answer that question by pointing at a particular ‘substance’ that is held to create or determine value, whether this be ‘socially necessary labor time’, as for Marxists, or (marginal) individual utility as for the neoclassical school. Recent developments in economic sociology have instead pointed at the performativity of the calculating devices that are deployed either in order to measure value directly or to process the necessary information that goes into the decisions that determine the relative values of assets and consumer goods (Callon, 1998; McKenzie, 2006). It is argued that once these become successful, they are able to posit their own object of measurement as a natural ‘substance’ of value. In this section I

will follow this lead in arguing that one important cause behind the present fusion of affect and value has been the establishment of a range of devices that measure and represent value as an expression of what are known as 'intangibles' assets, and most importantly, brands. However, I will also suggest that the success in establishing this 'intangibles paradigm' is linked to a transformation in the ways in which wealth is created. In other words, while actually operating notions of economic value may result from the performativity of calculative devices, it is difficult for those devices to establish themselves and achieve 'performative power' if they do not somehow reflect perceptions on the part of important actors or groups of actors as to the nature of the processes subject to measure and calculation.<sup>4</sup>

### *Productivity*

In the 'Fordist' economy, the prevailing measure of value was the productivity of time, and most importantly, labour time. Although this idea has a long history within economic theory, going back to 18th century economists such as Adam Smith, and before him Sir William Petty (see Linebaugh and Rediker, 2000), its institutionalization in managerial procedures and devices goes back to the managerial revolution at the turn of the last century (Chandler, 1977; Landes, 2003). This movement saw the rise of corporations and the standardization of the modern disciplines of management, marketing and, importantly accounting. The Fordist corporation was based on the principle of vertical integration, or the internalization of as many aspects of the production process as possible within a sphere of control and command. Taylorism, along with technologies such as the assembly line, allowed the subdivision of internalized productive processes into discrete units that could be supplied with specific job descriptions. In parallel, cost accounting was based on the calculation of standardized productivity rates for each such discrete subunit, and the measure of their value-added as quanta of productive time deployed. Deviations from such standardized productivity rates could be used to discipline or reward the workforce, because wages – as Fredrick Taylor himself had suggested – could be directly linked to the productivity of working time (Taylor, 1896). This meant that, at the level of the labour process, the tasks of measuring value and controlling the workforce were located in the same device: the productivity of labour as measured in relation to time.

At the level of the firm, the notion of 'productivity' served both as an object for managerial intervention, and as an explanation and legitimization of profits as well as, for shareholders, asset returns. This does not mean that labour was effectively the only source of value, as orthodox Marxists would claim, but rather that the way in which the production process was configured meant that the productivity of labour made sense as a transparent and commonly accepted way of representing processes of wealth creation, sufficient to confer legitimacy and rationality on the determination of wages and the allocation of capital.

Importantly, there were three reasons the notion of productivity could work in this way as a credible representation of the value-creating process. First because variable costs, such as labour costs, were high in relation to 'overheads' such as machine capital or patents, about 90 per cent in the 1890s; in other words labour was effectively the most important productive resource (Boer and Jeter, 1993). Second, because the internalization of the productive process meant that firms created value chiefly by deploying their own proprietary resources which could figure in their balance sheets. Third, because this internalization of the production process meant that it could be subdivided into discrete units where diverse productivity rates could be calculated. These three conditions are all less applicable today.

If the rise of the Fordist corporation constituted a managerial response to the growing complexity and socio-spatial extension of productive processes, then the impact of information and communication technology – principally the link between Computer Aided Design (CAD) and Computer Numerically Controlled (CNC) machinery – has, since the 1970s, enabled an even further extension of the levels of productive cooperation. Indeed, the present post-Fordist paradigm is marked by a socialization of productive processes outside of the factory, whether in the form of the 'Toyotist' model developed at Toyota in the late 1960s and early 1970s that combines flexible production, self-organized teams and just-in-time flows with Taylorist subdivision of tasks and the organization of production around the large factory typical of the industrial model (Morris-Suzuki, 1984); the 'Italian' model of 'industrial districts' that deploys networks of small, specialized firms (Beccattini, 1989; Piore and Sabel, 1984); or the global value chain that combines a diverse typology of firms that are, often, organized in clear hierarchies (as between first-, second- and third-tier suppliers, Fumagalli, 2007; Bertin, 1985). While Taylorist managerial practices still prevail in many parts of the economy, and are on the rise in some sectors such as fast food and certain aspects of education (Smart, 1999), the central tendency of the industrial model to concentrate as much production as possible in the factory has been inverted and replaced by a tendency to locate an ever larger share of production in productive networks that unfold outside the factory walls. Between 1985 and 2000, for example, the share of vehicle value deriving from outsourcing in the auto industry increased from 50 to 80 per cent in the case of Renault, and between 1997 and 2004 the share of (outsourced) imports to the US Auto Parts market grew from 40 per cent to 65 per cent. Today the supply chain of the automaker Hyundai involves 400 first-tier suppliers, and 2500 second-tier suppliers (Veloso and Kumar, 2002).

### *The rise of intangibles*

The socialization of material production means that the ability to engage in such forms of wealth creation has been generalized. To quote management scholars Paul Adler and Charles Heckscher, 'the mysteries of effective com-

modity production have become common knowledge; they are now merely tickets for entry rather than the keys for winning the competition' (2006: 28). Material production has become commonplace (or 'commoditized', to use an expression popular with business writers) and its share of value-added is in decline. The strategic focus on value creation is shifting towards so-called 'intangible' assets, including the capacity for innovation, flexibility and, most importantly, branding. But the production of such assets often occurs outside the control of single organizations and sometimes, as in the case of brands, it builds on input from non-salaried actors including consumers and the public at large (Arvidsson, 2006). Furthermore, the creation of value in this way mostly employs resources, such as communicative and social skills, the value-creating potential of which are poorly related to the quanta of time in which they are employed. Instead, as Paolo Virno would argue, the creation of intangible value in the form of a corporate culture conducive to innovation or teamwork, or an attractive brand, involves 'virtuosity' in the appropriation of common knowledge, symbols, relations and competences, or General Intellect (Virno, 2004). This means that the value creation of intangible resources is less susceptible to measurement in terms of the productivity of time, and depends more on the ability to attract affective investments such as reputation, goodwill or employee motivation. While this does not mean that labour has 'disappeared' or 'no longer counts', it means that labour ever more creates value in ways that are poorly related to quanta of time. Indeed it can be argued that there is an extension of the range of social activities that now count as value-creating 'labour', including the 'labour' of consumers or that of Internet users in general (cf. Fuchs, 2010; Zwick *et al.*, 2009).

However, since the resources that are employed in the creation of intangible value, like General Intellect and communicative skills (or what Virno calls 'mass intellect') are often not proprietary, they figure badly on the balance sheets of companies. Together with a general financialization of the economy, where larger shares of corporate profit derive from financial rents, this has caused a pressing issue of growing discrepancies between the market and book value of companies (Harvey, 2010). This, in turn, has created an opening for new kinds of calculative devices that are able to account for and make good these discrepancies, not least since the rational market hypothesis of neoclassical economics (and neoliberal ideology) is losing credibility among economists, social scientists and, crucially, actual practitioners (cf. Fox, 2009).

### *Brand valuation*

The notion of 'intangible value' has emerged primarily as an answer to this problem of how to account for and make good widening discrepancies between market and book value. The origins of the concept can be traced to the transformation of accounting and control practices that accompanied the socialization of production in the 1980s. As outsourcing and the creation of global supply chains began to shift the strategically most important source of value



away from productive time per se, to other 'assets' like capacity for innovation and flexibility, management responded by implementing measuring devices like Value Flow Analysis and Total Quality Management. These devices were aimed at measuring the productivity of the whole value chain (and not as earlier, a single unit of that chain), paying attention to novel factors like the ease of integration of the chain and the flexibility of its response to market conditions (Glover and Fitzgerald-Moore, 1999; De Angelis, 2007). In the 1980s, similar devices were developed for the control and management of knowledge work (chiefly through the pioneering work of Skandia AFS, cf. Edvinsson and Malone, 1997). Here new forms of bench-marking, such as 'balanced score-cards' measured the efficiency of employees in a wide variety of ways, including their cooperative and social skills: that is, their ability to learn from each other and extract operative skills from the General Intellect of the firm and its surroundings.

These devices were important for management and control purposes, but for value reporting purposes they tended to be subsumed under the concept of 'brand'. Again, the notion that brands could have economic value has a long prehistory. It goes back to the marketing revolution of the 1950s that began to shift managerial focus from production to sales and market demand as a source of value creation, and the parallel development of the concept of brand image as something distinct from products (Gardner and Levy, 1955). A more mobile consumer culture that created forms of demand that were more difficult to anticipate, along with the development of a global consumer culture and, with it, global brands (Levitt, 1983) put an extra premium on the additional ability to predict demand that came with brands. Along with these developments there was a growth in practices and devices, such as Customer Relations Management, that extended the scope of management to the relations that a company could entertain with consumers, and eventually other stakeholders.

While these developments have paved way for the notion that the value of assets such as flexibility and knowledge was ultimately set by consumers, the necessity of measuring the value of such relations only became acute with the financial bubble of the 1980s. The wave of mergers and acquisition that then marked the 'creative destruction' of the remains of the Fordist industrial economy called for a legitimate way to account for discrepancies between market and book value. A number of brand valuation companies rose to the challenge by identifying the variable success of brands, or the relations that a company had established with consumers, as a credible source of the difference in value (Lury and Moor, 2010). For example, while today's leading brand valuation company Interbrand was founded in 1974, under the name of Novamark, it remained a brand and design consulting company for that decade. It only took up brand valuation in 1987. As its founder John Murphy told the trade magazine *Brand Management* in 2001, there was 'a huge buying and selling of branded-goods businesses where what was essentially being bought and sold was brands. But nobody knew how to value brands' (Holdsworth, 2001). Interbrand went on to establish its leadership of the field by valuing the Pillsbury

brand for the Grand Metropolitan PLC acquisition of Pillsbury Co. From the start, the Interbrand method contained three elements: first, an estimation of the strength of a brand based on its market and management; second, an estimation of the proportion of company earnings attributable to the brand; and third, a brand multiplier based on the ‘quality’ of the brand: a measure that built on market data as well as data on the affective relations that the brand had managed to install with consumers.<sup>5</sup>

Most contemporary brand valuation models maintain some version of this approach, although some simply calculate the difference between market and book value and attribute that to brand. However, the tendency has been to measure consumer affect in more and more detailed ways and to give it a more central role in the calculation of ‘brand multipliers’ (that is, in estimates of the share of future earnings that can be reasonably attributed to consumer attitudes and relations to the brand, as opposed to market factors like price, location or the strength of distribution channels – cf. Salinas and Ambler, 2009). For example, Young and Rubicam’s *Brand Asset Valuator* centres on a calculation of consumer perceptions of brands ranked along four dimensions: ‘differentiation, relevance, esteem and knowledge’. The Milward Brown *BrandZ* method creates its multiplier by estimating consumer relations to brand along a scale encompassing ‘Bonding, Advantage, Performance, Presence and No Presence’.<sup>6</sup>

The point is that brand valuation established one of the first solid links between the public expression of affect, in the terms of the dimensions used to measure brand multipliers, and economic value, in terms of asset valuations on financial markets. In this way brand valuation constituted an emerging measure of the economic value of affect. I use the term ‘emerging’ because, to date, the field of brand valuation has not stabilized. In a survey from 2009 Salinas and Ambler identify 52 key operators globally, using 17 different methods. Valuations of individual brands also tend to diverge greatly: the same survey shows how the valuation of Apple, Toyota and Samsung by the market leading valuation firms Interbrand, MBO and Vivaldi differ by as much as 300 per cent. What is more, there is a growing suspicion, even among practitioners, that existing valuation methods tend to overvalue brands. While reported brand values have been continuously increasing in the last decade, underlying data such as consumer confidence in brands are on the decline (cf. Gerzema, 2008). However, a number of developments – driven by the very tendencies that made brand valuation possible in the first place – point towards a more stable measure of the economic value of affect.

## General Sentiment

General Sentiment is a technology company that produces comprehensive research products to help marketing, sales and communications executives evaluate their brand performance in the media, and assess return on investment.<sup>7</sup>



In the 1980s, when it first gained prominence within finance, accounting and management, the concept of brand value was a response to the desire to solve two ‘mysteries’: the ‘mystery’ of value creation in an ‘emerging different model, which responds now more and more to post-industrial organizational and management criteria [that are increasingly] service-based, immaterial, low workforce rate, network shaped’ (Cordazzo, 2007: 67); and the ‘mystery’ of growing discrepancies between market and book value. The solution to both ‘mysteries’ was to attribute value to measurable public expressions of affect. However, this solution was only possible because such expressions of affect had begun to become public and measurable in the first place.

What does it mean for affect to become public and measurable? It means that affect can be represented independently of the specific idea to which it is linked, that it can become visible as a distinct ‘substance’, so to speak. It is important to distinguish affect from idea. Gilles Deleuze does so in a masterly fashion in his lectures on Spinoza:

the idea is a mode of thought that is defined by its representational character. This already gives us a first point of departure in distinguishing idea and affect (*affectus*) because we call affect any mode of thought that does not represent anything. So what does this mean? Take at random what anybody would call affect or feeling, a hope for example, a pain, a love, this is not representational. There is an idea of the loved thing, to be sure, there is an idea of something hoped for, but hope as such or love as such represents nothing, strictly nothing. Every mode of thought insofar as it is non-representational will be termed affect. (Deleuze, 1978: 1–2)

Seen this way, the precondition for linking economic value to affect was that affect as such, regardless of the specific idea or representation to which it was linked, was becoming public and measurable, was acquiring a tangible substance. I argue that this process – of the substantiation of affect – involves both the remediation of affect through the restructuring of the public sphere, and the development of new measurement devices that are able to create a new general equivalent, against which specific manifestations of affect can be evaluated, regardless of the concrete ideas or representations to which they are tied. I call this new ‘substance’ ‘General Sentiment’.

### *The remediation of affect*

The notion that the modern, mediated public sphere is capable of transforming individual ideas into a General Will (to use Rousseau’s expression) that results from rational forms of public deliberation is well established in modern social theory (cf. Habermas, 1989). There is, however, a less established, but important parallel tradition that points at the capacity of modern forms of publicity to bring forth other forms of affect.

Starting with 19th-century ‘crowd psychologists’ like Gustave le Bon, Hippolyte Taine and Schipio Sighele, this line of thought has its perhaps most sophisticated ‘classical’ expression in Gabriel Tarde. For Tarde, the becoming public of affect is strictly connected to the rise of modern consumer culture, and

the new link between affect and economic value that it promoted. In his *Psychologie économique* (1902) Tarde pointed out how, with the formation of modern mass publics, the value of commodities increasingly builds on their ability to sustain forms of 'mental communion' (*communion mentale*) among members of the public. In the absence of traditional value systems, such mental communion is what sustains conventional notions of the 'truth, beauty and utility' of goods, on which, in turn, their value is ever more based. It is important to stress that for Tarde, the formation of such a mental communion precedes the formation of opinion; it is the mental communion that forms around an object, the fact that people affect each other in relation to it that sustains opinions about its utility or beauty. Indeed for Tarde the very basic elements of the social are such mental communions, in which one mind affects the other in a multiplicity of ways. That is why he kept arguing for a social psychology, against Durkheim's sociology.<sup>8</sup>

In Tarde's view, the production of value in consumer culture thus directly involves and includes the new and rapid forms of circulation and combinations of affect that are enabled and brought out into the open by a modern media environment and, importantly, by the new role of consumer goods as catalysts of such forms of public affect. Friedrich Kittler makes a similar point in *Discourse Networks*: rather than being experienced as something entirely interior, as in the 19th-century romantic tradition, the formation of affect and sentiment is now partially externalized, guided by the flow of public opinion and the catalytic role of celebrities and *divae* as (momentary) containers of affective investment. To put Kittler's argument in excessively blunt terms: the subject of the 1800s experienced his ideas and affects as his own, but the subject of the 1900s experienced her ideas and affects as something that she adapts from the outside world (Kittler, 1990).

For Tarde, it is the immaterial aspects of goods, their 'truth, beauty, and utility' that sustains communions of public affect. Since Tarde, cultural studies and the sociology of consumption has provided a large corpus of research that shows how the immaterial aspects of consumer goods are able to sustain subcultures, brand communities and other kinds of mental communions that are kept together by strong affective investments (Arvidsson, 2006; Maffesoli, 1995). So it would seem reasonable to suggest that the remediation of social relations that has accompanied the rise of consumer culture has effectively managed to transform the nature of affect, from something private or at least located in small interaction systems, to something that acquires an objective existence as a value creating 'substance' in the public domain. Social media have taken this process one step further.

Possibly we are in the middle of a remediation of the public sphere that is as radical as that which followed the impact of print, as social media are rapidly becoming the default application of the Internet and the 'normal' way to communicate (in the sense of transferring ideas as well as in the sense of fostering affective 'communion' with others). For example, during the first eight months

of 2009 Facebook grew by 100 per cent, from 100 million to 200 million users; at the time of writing it has surpassed 500 million; twitter grew by 1440 per cent in 2008 and is presently targeting one billion users. Already today more people use social media than email (MacMillan, 2010; Rayport, 2009).

What happens when social and affective relations are remediated by social media? Social media have two central properties that are relevant to this argument. First, if, as McLuhan claimed, print fostered the cold and distant subjectivity of bourgeois culture, then social media tend to connect people to each other. As many media scholars have underlined, the result is a more interdependent, or even 'networked' subjectivity, where proximity to and close affective experiences of others become important building blocks for identity, and where other people's evaluation of one's identity (or 'brand') becomes central not only to one's sense of self-worth, but also, and increasingly, to one's objective value as a professional, networker or 'micro-celebrity' (Marwick and Boyd, 2010; Hearn, 2008). Second, social media add to the process of the becoming public of affect by introducing an aspect of objectivity. Affective relations now become tangible in a wide variety of manifestations: the links that tie a blog to its network, friends on a social media page, 'social buttons' like Facebook's 'like' button, re-tweets, or even explicit ratings of the truth, beauty or utility of a person, object or service (cf. Gerlitz and Helmond, 2010). In this sense, social media are 'phatic media' in the double sense of both fostering the formation of public affective relations through 'non-dialogic and non-informational' practices of 'keeping in touch' (Miller, 2008: 388, 395), and of enabling such manifestations of public affect to act as an objective criterion of the value of individuals and other actors. However, this becoming-objective of public affect and its becoming-effective as a criterion of value is also dependent on the development of new methods of measurement.

### *Affective proximity*

Tarde's insight about the role of public affect in value creation led him to argue that economics should be rationalized through the development of instruments that are able to measure such valuable investments of public affect with greater degrees of precision (Latour, 2004). However, during most of the 20th century neither economics nor the social sciences generally have paid much attention to Tarde's call. Economics remained with a one-dimensional definition of value, and even if the social sciences have developed a rich tradition of communication research, this has, with few exceptions, been mainly directed at studying the diffusion of ideas and opinions, and not the formation of affect per se. One notable exception has been the tradition of advertising psychology, which, starting with the pioneering work of Walter Dill Scott, devoted energy to developing methods for measuring phenomena such as the suggestive power of advertisements, above and beyond their powers of rational persuasion (Arvidsson, 2003a; Beale, 1991; Chessel, 1995). This research was linked to a notion of 'suggestion'

where advertising was thought to work mainly through its powers of affective attraction.

However, attention to the affective relations that advertisements were able to instil in subjects never established itself as a principle for measuring the value of advertisements or of advertising space. Instead, as radio emerged as the most important advertising channel in the 1930s, the value of advertising time was measured according to socio-demographic techniques that built on the segmentation of audiences into predetermined classes, the so-called ABCD approach (Arvidsson, 2003b; Lockley, 1950; Converse, 1987). The ABCD approach institutionalized the notion that the value of advertising space depended on the 'productivity' of its destined audience segment in transforming advertising stimuli into effective demand. In this way the value of advertising space could be calculated in terms of the attention time of a particular segment, mirroring the notion of productive time deployed in Fordist cost accounting.<sup>9</sup>

The notion of affect as a criterion of value would only affirm itself in the 1960s, with the establishment of methodologies for so-called psychographic, or lifestyle, segmentation. This technique built on the use of large-scale surveys that mapped consumers according to a wide range of different values that, like the AOI (Attitudes, Opinions, Interests – Wells and Tigert, 1971) and later VALS (Values, Attitudes, Lifestyles – Mitchell, 1984) went far beyond what was directly related to purchases or attitudes to consumer goods. This data were subsequently submitted to inductive multivariate analyses (or 'cluster analysis') and the resulting correlations were represented as 'lifestyles'.

The reasons behind the success of psychographics were many. The 1960s had seen a transformation of the media environment, driven by the establishment of television, that demanded new kinds of audience segmentation. The computers necessary to perform the complicated forms of data processing became affordable for mid-sized organizations like advertising agencies and market research companies. The previous decade has seen a rising popularity of qualitative audience research that supplied new and interesting kinds of information. Most importantly, however, there was a perception of a general transformation of consumer culture, and a sense that the consumer desires were being de-linked from class structures (Frank, 1997; Wells, 1974). Its methodology involved a number of important innovations. First, it pioneered the kinds of inductive statistics that have become a basis for the data-mining techniques still in use today (see below). Second, lifestyle segmentation created a picture of the market in which consumer demand was seen to be determined by a number of affective concerns that appeared as independent in relation to the position of consumers vis-à-vis their position in the industrial economy. Third, and importantly, psychographics introduced a new definition of economic value, if only in an embryonic form. As lifestyle analysis was used to determine the value of advertising space in terms of how well the value structure of a particular medium coincided with the 'lifestyle' of a targeted consumer group, it introduced, for the first time, a notion of 'value distance' or affective proximity as a measure of economic value.

In the 1970s psychographic segmentation was based on large-scale surveys. Beginning in the 1980s the proliferation of credit cards and bar codes created vast data banks that were generated ‘naturally’, so to speak, at the point of purchase in stores and supermarkets. This information was subjected to data-mining techniques that were essentially refined versions of the kinds of multivariate cluster analysis deployed in psychographics, to generate the kinds of information that went into Customer Relationship Management programmes, and eventually brand valuation instruments (Arvidsson, 2003b). More recently, the arrival of the Internet, and in particular of social media, has greatly expanded the range of naturally occurring data that can be submitted to such data-mining techniques and – social media in particular – has provided a wide range of data on public affect that lends itself to such statistical profiling.

The methods that have been most popular in processing social media data have been network analysis and sentiment analysis. Network analysis has been deployed within the social sciences since the 1960s, but the arrival of networked communication media has given a boost to this methodology as a wide range of meaningful large relational data-sets are now available (Barabasi, 2003; Watts, 2004). In the field of value measurement, network analysis has been used for some time by managerial scholars in computing inter- and intra- firm ‘social capital’, and more practically, by companies, including IBM, as a knowledge management tool, where calculations of the centrality of employees to communication flows are taken as valid measures of their economic productivity (Baker, 2009). In calculating the value of public affect the main application of network analysis has been that of identifying ‘influencers’, people who have a central position in relational networks and communication flows, and who are therefore ‘worth more’ as communication channels. Yahoo has been using this approach for a long time in order to identify ‘influencers’ to be used in marketing campaigns, and Facebook is developing a similar approach to enable advertising to be placed on the basis of preferences expressed in personal networks. In the growing business of applying data mining to the measurement of brand strength and return on investment (ROI) in viral marketing campaigns, network analysis is used in identifying the degree to which a certain campaign has managed to influence actors that are central to communication networks as one dimension of ROI.

A second dimension is provided by Sentiment Analysis, which is based on the automatic recognition of the affective valence of words or patterns of words used in text. The challenge consists in overcoming the ambiguity and polyvalence of natural language. This issue can be addressed by machine learning approaches where an algorithm is trained on independent data-sets (cf. Dave *et al.*, 2003; Pang and Lee, 2008; Pang *et al.*, 2002). However, such approaches have only become feasible with social media, for two reasons. First, because only these platforms supply the vast amounts of data needed to even out errors and reach reliability rates compatible with those generated by human observers. Second, because only social media provide large enough sets of training data,

such as movie or product reviews, where text is linked to quantitative estimates of value (in the form of number of 'stars' or other kinds of ratings).

In practice, sentiment analysis is used to generate quantifications of the intensity of affective investments in an object. Brand valuation service such as Radian or Sysomos, for example, use sentiment analysis to determine whether a branding campaign has generated a shift in the positive or negative intensity of affect invested in the brand on the part of the public or, to use the current term, in sentiment.<sup>10</sup> Similarly, sentiment analysis is growing in importance as a component of information systems for financial operators and other kinds of asset valuers. The company *Streambase*, for example, generates trading recommendations on the basis of a sentiment analysis of online news. *Covalence* mines a wide range of sources on Corporate Social Responsibility and subjects them to a sentiment analysis, the output of which is presented as an indicator of the 'ethical status' of an asset.<sup>11</sup> Many more of these applications are emerging, in particular around twitter because it has (so far) permitted public access to its data and is rapidly becoming a fairly representative platform of Internet traffic in general.

The use of network analysis, sentiment analysis or some combination of the two is presently emerging as a new paradigm for measuring assets, communication campaigns or individuals in terms of what is increasingly talked about as their 'reputation' (Marwick *et al.*, 2010). In most models, reputation is defined as some combination of three measurements: the number of times that an object is mentioned; the network centrality (or influence) of the actors mentioning it; and the affective intensity (sentiment) with which they mention it. All of these metrics measure affect independently of ideas: the ideational content of specific affective investments is removed. Instead the value of affect is defined in terms of proximity. Network analysis defines influence (or network centrality) according to a number of measures that describe their distance to other nodes in the network, or to use the increasingly influential term coined by Facebook founder Mark Zuckerberg, 'social graph' – a sociogram that depicts all relations between individuals on the site regardless of what that particular network (or social graph) is *about*. (Facebook communication is of course not *about* anything, it is a place for the formation of affective, 'phatic', relations.) Sentiment analysis defines sentiment according to two dimensions, 'valence' or the sum of the affective valence of the words occurring in a message and 'arousal' or the sum of the absolute values of the valences. Here, too, the affective valence of words is defined according to a variety of lists that report their affective charge in natural language use, independently of the ideas that they might convey, individually or in combination (see for example Bradley and Lang, 1999).

### *General Equivalent*

My argument is that the convergence of social media platforms and data-mining techniques and methods like network and sentiment analysis are creat-



ing a common approach towards the measurement of public affect, or General Sentiment. This common approach is emergent: it has already established itself in some sectors including brand valuation and the estimation of ROI on viral marketing campaigns; it is growing as a basis for social media business models; and it is making inroads in areas such as financial asset valuation and estimations of the value of corporate social responsibility and ethics. What is more, this approach has a history that goes back to the 1970s and the impact of psychographic segmenting. In other words it has been emergent for a long time, and this emergence is undergoing a natural acceleration with social media.

This emergent common approach is built on a distinct way of objectifying affect. First, it is based on inductive statistics like cluster analysis and other forms of pattern recognition that are able to find regularities in large data sets without departing from any *a priori* presuppositions about the nature of those regularities. This means that General Sentiment is able to be represented as an emergent variable that does not appear to be caused by any other factors. Like gold for the classical economists it can be a kind of *deus ex machina*: the commodity (or in this case, the artefact) by means of which the value of all other commodities (assets or communication channels) is established.<sup>12</sup> Second, General Sentiment is quantified in terms of value distance or, which is the same thing, affective proximity. This was an element already present in psychographic clustering where clusters were defined according to vector distances in a multivariate space, and it is a basic presupposition in both network and sentiment analysis. The criterion of 'distance' is able to generate a measure of General Sentiment that is independent of the particular ideas and representations that might ground individual value judgements. Regardless of whether I am a Christian or a Muslim, the tweets that I produce can still be judged in terms of a universal, if temporary, scale of positivity and negativity. The same thing goes for my position in a network, or for my expression of preferences in rating systems. However, like the General Equivalent of money, and unlike the universals of modern morality, the standard of judgement does not refer to any fixed values, but only refers back to the status of the system as a whole. Positive or negative sentiment is judged according to a wordlist that is itself derived empirically from natural language use. And different such word lists are constructed as algorithms, trained on different data sets, such as movie reviews, financial data, or ratings of different kinds of consumer products (see for example O'Hare *et al.*, 2009), and network centrality is calculated in relation to the network itself. In other words: unlike modern value systems, General Sentiment has no dimension of transcendence. Instead it appears as an immanent emergent element, an effect of the intensification of communicative flows operated by emerging devices of representation and measurement

So it seems that we are acquiring a new General Equivalent – a General Sentiment – that is measured according to three dimensions: the strength of the

affective charge of a message (sentiment); its influence (network centrality); and the numerical size of its occurrence. Incidentally these dimensions coincide precisely with the factors that Gabriel Tarde thought would determine the strength of the mental communions that he argued underpinned perceptions of immaterial value: 'le plus ou moins grand nombre: le plus ou moins poids social (ce qui veut dire ici considération, compétence reconnue) des personnes qui s'accordent à l'admettre, et le plus ou moins d'intensité de leur croyance en elle' (Tarde, 1902: 62).

The emergence of this general equivalent is the combined outcome of new measurement systems and an ongoing remediation of affective relations. Just as, according to Marx, the re-mediation of productive cooperation, through assembly lines, factory systems and ultimately a world market effectively made individual skills and competences measurable in terms of abstract labour time, so the remediation of affect, through the industrialization of culture and the emergence of a mass public and more lately social media, confers a general nature on what were previously particular and private manifestations of affect and renders them objectively comparable, measurable and visible as a manifestation of General Sentiment.

To Marx, the value-form that eventually emerged out of this process, the productivity of labour time, was a direct reflection of the objective reality of an underlying value-creating process. Can we claim that the value form of General Sentiment – affective proximity – is a direct reflection of the objective value-creating process that unfolds in the social media based public sphere? Maybe we can put it in a weaker way: the predominance of finance as the main mechanism of valorization and the strong link that is emerging between financial value and objectified forms of reputation, like brands; the importance of brands as intangible assets for companies and, increasingly, for individuals; the crucial role that connections and social capital plays in a networked economy; and the growing importance of social media are all factors that are likely to make a measure of value in terms of General Sentiment, as defined above, reflect perceptions on the part of important actors or groups of actors as to the nature of the processes subject to measure and calculation.

## **Conclusion: politics after Parsons?**

It would seem that the devices that are presently emerging as measurements of value in terms of General Sentiment are effectively paying heed to Tarde's call for a more multidimensional economic analysis. Ultimately this might lead to a recognition that value decisions are ever more based on multiple and diverse processes of public deliberation, rather than on universally valid rules; and that such decisions are essentially political, or perhaps better, ethical. In such a situation a political agenda could reasonably aim for the opening up and democratization of such deliberative processes, allowing them to reflect a multitude of different perspectives and value horizons. Conceivably this can be achieved

through the construction of a multitude of different devices that allow for such extended forms of deliberation, by means of a *Dingpolitik*, to use Bruno Latour's (2005) term. For this to happen it is crucial that access to the underlying data remains open and free, so that actors that do not have the economic means to pay for such data, such as activist groups, consumer cooperatives or other non-profit organizations, will be able to construct and operate devices. To date, this has been the case in relation to Twitter (but not Facebook), but rumour has it that Twitter is now planning to charge for data access. In the light of this, an important political agenda, in for example, traditional parliamentary politics, must be to work for the regulation of social media 'utilities' (Boyd, 2010) in such a way that data access remains as open as possible.

## Notes

- 1 'Wealth Management Group' is a pseudonym. I have obtained permission to quote the document on condition that the identity of the actual companies involved is not revealed.
- 2 Concepts like 'Fordism' and 'post-Fordism' are to be understood as Weberian ideal types that help us to navigate a complex empirical reality, rather than as accurate representations of that reality. While 'Fordism' is generally used to indicate a model of economic and social organization that prevailed as a paradigmatic ideal in the postwar years, the argument also recognizes the actual diversity of prevailing modes of economic organization and the varying degrees to which the ideal of Fordism actually came to structure economic processes in different temporal and geographical contexts. For discussions of the theoretical status and empirical relevance of the concepts of 'Fordism' and post-Fordism see Amin (1994) and Harvey (1991).
- 3 In 1950 intangibles accounted for roughly 20 per cent of the market value of the S & P 500, today the figure is 70 per cent. Brands account for, on average, 30 per cent of market value, although this varies considerably between sectors and companies (Lev, 2001; Mandel *et al.*, 2006; Nakamura, 2001; Gerzema, 2008).
- 4 In other words, the argument in this article is organized around a weak version of the 'performativity paradigm' that is now near to hegemonic in economic sociology. I recognize that the performativity of economic theories and their embodiment in practical devices matter, but believe that, however important such performativity may be, it remains inscribed in a larger socio-historical context that limits and structures its scope and potential. For an excellent discussion of the performativity paradigm in economic sociology, see McKenzie *et al.* (2008).
- 5 See also Interbrand Corporation, Company History, available at <http://www.fundinguniverse.com/company-histories/Interbrand-Corporation-Company-History.html> (accessed 7 December 2010).
- 6 On BrandZ, see 'Cristiana Pearson explains the methodology behind the 2010 BrandZ Top 100', available at <http://www.millwardbrown.com/Sites/mbOptimor/Ideas/BrandZTop100/VideoPlayer.aspx?Param=1124997e-0e18-4bc9-bc5a-29b2f964bb66> (accessed 7 December 2010), on the Brand Asset Valuator see <http://www.brandassetconsulting.com/>
- 7 <https://www.generalsentiment.com/what-we-do.html> (accessed 26 November 2010).
- 8 'La société est un tissu d'actions inter-spirituelles, d'états mentaux agissant les uns sur les autres. . . . Chaque action inter-spirituelle consiste dans le rapprochement entre deux êtres animés, dont l'une impressionne l'autre . . . La société donc, en son essence intime, doit être définie une communion mentale' (Tarde, 1902: 1–2).
- 9 In the 1970s, Dallas Smythe would build on this model in developing his theory of the 'audience commodity' (2002 [1978]).

- 10 <http://www.radian6.com/>, <http://www.sysomos.com/>
- 11 <http://www.streambase.com/>, <http://www.covalence.ch/>
- 12 Of course, Marx saw gold as a fetish for labour. He argued that the value of gold is itself dependent on the socially average labour time needed in its production (Marx, 1976 [1867]: 188).

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