rather than ended: this is why we need to find the way to consider together text and technology to understand how television socially worked and works.

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Gabriel Gatti, Iñaki Martinez de Albéniz and Benjamín Tejerina (eds)

Tecnología, cultura experta e identidad en la sociedad del conocimiento

(Technology, Expert Culture and Identity in the Knowledge Society)

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The book is a collection of contributions presented at the seminar "Knowledge Society, Identity and Social Change – The Material Supports of Identity", organised in 2005 at the University of País Vasco, Bilbao, by the CEIC (Centro de Estudios sobre la Identidad Colectiva) and the Department of Sociology, and it is a material proof that Actor-Network Theory (henceforth ANT) is becoming a very dynamic field of investigation in Spain, thanks to an increasing number of conferences and publications promoted by universities and research centres.

As the three editors state in the introduction, the volume aims to fill two gaps in social sciences focusing on how society and identity are shaped in the knowledge society, which is characterised by the pervasiveness of technology. The first gap is the lack of attention given to the impact of social scientists' representations on their analyses of society and identities (sociology is not purely descriptive but also performative). The second gap is related to the material dimension of the construction of identity, which is mediated by technologies, embedded in heterogeneous artefacts, rather than being the exclusive result of social construction, as a phenomenological perspective has claimed so far, privileging symbolic and intersubjective aspects. The book is organised into two sections, dedicated to these two points.

The first section, "Expert Knowledge and Identity", adopts a sociology of science perspective to point out the influence of scientific representation in the construction of identity and society, which are not static or given once for all, but must be regarded as dynamic, heterogeneous, fluid, porous, hybrid and malleable.

The first chapter, "The Problem of Materiality in Science and Technology Studies", is written by Miquel Domènech and Francisco Javier Tirado, members of the GESCIT (Grup d'Estudis Sociales de la Ciència i la Tecnologia), at the Department of Social Psychology of the Autònoma University of Barcelona. The authors have actively

contributed to the translation, diffusion and development of ANT in Spain (in 1998 they edited *Sociología simétrica*, the first book dedicated to ANT, with translations of works by Callon, Law and Latour). This chapter also shows how in Spain ANT is mainly rooted in a sociology of knowledge framework and moves from the techno-science field to update the traditional concepts of sociology, social psychology and anthropology (Castillo Sepúlveda 2011). The chapter is the theoretical manifesto of the book, proposing a new approach able to question the modern dualism and "a priori" distinction between nature and society, humans and artefacts. By recognising the contribution of Science and Technology Studies, especially of the socio-technical (Hughes 1987), SCOT (Social Construction Of Technology - Pinch and Bijker 1987) and ANT approaches, the authors refer to the principle of symmetry (Latour 1992) and to the postulate of heterogeneity (Law and Bijker 1992) to embrace a "third" perspective, able to overcome the tension between the social and the technological determinism. Adopting a symmetric approach means blurring the boundaries between social, material and natural, highlighting the heterogeneous work of engineering by which social, technical and material aspects intertwine with each other. When we consider agency as only human and social, we neglect the materiality of the world: that is, all the missing masses which are also provided with agency and are actively implicated in social practices. After this chapter, which clarifies the theoretical approach of the volume, we get to the heart of the research projects, which show how expert and scientific knowledge contribute to the configuration and naturalisation of society and identities.

The chapter by Pablo Marinis, "Expert Knowledge and its Power to Make and Unmake 'Society'", focuses on the role of a new professional agent, a new personification of expert knowledge, a 'new servant of the prince': that is, the symbolic analyst, whose identity is fluctuant, adaptable, and neither corresponds to the old ideal-typical figure of the intellectual or the academic nor to the social engineer of the Keynesian rational model. The symbolic analyst is a pragmatic expert, a counsellor with mobile and flexible institutional affiliations. He participates in government policies, is involved in think tank activities, or works for NGOs as a consultant, dealing with the development and management of contingent projects. He maps the territory of social action; creates new communities and identities (with the cold know-how of the expert who believes in the malleability of the world) as a "beneficiary of program", "neigh–bour", "consumer", who ideally participate in cosmopolitan governmental policies through committees and assemblies.

The chapter by Benjamín Tejerina, "Knowledge Society, Social Mobili-

sation and Collective Identity", focuses on how scientific knowledge turns into common sense when social movements acquire it and adapt it to their life-world. By giving voice to environmentalists, feminists and peace campaigners, Tejerina shows that social movements are a symbolic and material support for the construction and maintenance of identity. Their organizations and interaction systems work as spheres of socialisation and knowledge transmission. The techno-scientific debates sparked by their action challenge the dominant scientific knowledge and point out the necessity for activists to adopt a more professional profile. They should be able to transform their alternative practices into expert knowledge, and learn, enhance and use this expert knowledge (and convey it to the militants) to support their claims and their battles for social change, but they should also acquire the pragmatic knowledge to orient public policies.

The second section of the book, "Material Supports of Identity", collects a series of empirical studies carried out in a wide range of contexts and focused on a variety of topics (cultural heritage, social meaning of trash, gastronomy, mobile phones). These studies show the relevance of the technological mediation in the construction of identity, analysing the material supports where identities are embedded. Here, materiality is not regarded as a latent, inert and intrinsic quality of the object, or as an element that only emerges when the object 'resists' some specific use or social representation, or as a mere social construction.

The chapter by Antonio Ariño, "The Construction of Cultural Heritage" and its Paradoxes, presents two conflicting approaches to materiality – the immanent and the constructivist one – analysing how societies and communities attribute a patrimonial and aesthetic value to specific objects. Cultural heritage is generally associated with an intrinsic quality of the objects, which only experts can identify, or with a network activated by specific social groups and involving conflicts for the attribution of the status of "cultural heritage". Today, cultural heritage is related to the identity policies of an increasing number of communities. The society produces cultural and identity value, but it is the material construction of cultural heritage that makes identity more solid, stable and visible, and therefore socially representable. Cultural heritage creates four paradoxes: ontological (the rapid obsolescence of techno-scientific objects requires the conservation of a growing number of ordinary items, which are consequently devaluated), methodological (the meaning of the objects changes and turns them into fétiches and objects of consumption), pragmatic (the proliferation of patrimonial objects creates conflicts involving antique dealers, dealers of cultural goods and restitution-related issues) and ecological (the increasing number of tourists visiting cultural sites spoils art treasures and historical

or cultural relics) .

The chapter by Gabriel Gatti, "The Materiality of the Dark Side (Notes for a Sociology of Waste)", considers waste as a form of materiality opposed to that of cultural heritage. While the construction of cultural heritage is aimed at enhancing the aesthetic value of objects, bringing their materiality out and turning it into the symbol of an identity, waste materials question this materiality. Through a set of significant vignettes illustrating various forms of materiality (the debris from the Madrid train bombings; the Diogenes Syndrome, i.e. the compulsive hoarding of rubbish; the remains used by CSI investigators; the cartoneros), Gatti shows the meaning that social sciences have attributed to the waste of society: initially regarded as unclassified, anomic materials, it has later been considered as a danger to be controlled (but according to the Chicago School, marginal urban areas are consistent, meaningful and parallel worlds with their own social order and culture), and today it is the object of active development policies. As the volume of garbage grows, people become responsible for it: the rubbish is re-used (as in the case of recycling or second-hand shops) or transformed into energy. In the knowledge society, trash is more a product than a waste material: the more its volume increase, the less waste is considered as such. Our society provides rubbish with new uses and identities; it creates new experts and allows new ways of expression (such as forms of art where waste materials are exhibited in museums, taking on new meanings and new life).

Iñaki Martínez de Albemiz, in his chapter "Talking with Your Mouth Full. The Social as a Regime of (In)compatibility between Eating and Talking", shows that when we eat and talk simultaneously, words (discourse) and things (food) combine and collide with each other in our mouth. The fight against materiality here takes the form of a rule of etiquette ("don't talk with food in your mouth") stating the incompatibility between talking and eating. Socialisation implies the passage from nature to culture, from the uncontrolled oral expression to the articulated language. To make this transition possible, it was necessary to remove materiality, which was seen as an obstacle to the self-sufficient rationality of modernity, and create a greater distance between eating and talking. From the regimes of the past, where eating and talking were compatible (such as in the Christian Agape Feasts and Carnival Banquets), we move to other social regimes. In the bulimic regime of the capitalist bourgeois society, eating is regarded as a public ritual and is the background for a stylised sociality or a public-political dialogue (illustrated banquet), whereas in the private sphere the individual eats in compulsive way. The anorexic regime of the knowledge society is instead characterised by a theoretical curiosity about eating. In this society we do not talk as much about what

we eat as what we don't (scientific banquet). The combination of cooking and science, the so-called molecular gastronomy, the high-tech kitchens where everything is exhibited as if they were laboratories, the visibility of cooks on the media, and the introduction of new technologies and scientific methods in the cooking field, constitute the socio-technical framework of the knowledge society, where materiality emerges as a distinctive element.

After interviewing mobile users and observing their daily use of technology (in London, Madrid and Paris), Amparo Lasén, in "Affective Technologies - How Mobile Phones Contribute to the Shaping of Subjectivities and Identities", points out the necessity to explore how the relation with and the use of technology shapes and is shaped by users' identity. In our society, where sociality is related to multiple and transient identities in variegated groups, subjectivity emerges from and through a network of heterogeneous material and immaterial interactions. Mobile phones, as a part of this network, are an affective technology that allows us to share emotions with others, to construct and maintain social and affective ties, to manage and materialise the others' virtual absence and presence, to defer social encounters and take emotional distance from embarrassing situations, to personalise services (ring tones, screensavers), to record personal stories and keep track of significant past life events. The tactility of mobile phones embodies the relationship between the materiality of the body and the object (as when we play with our phone while waiting in a café, or when we hold it in our hands when we go jogging). While the design of mobile phone shapes our gestures, postures and code dressing, it also allows us to acquire new perceptive abilities. The possibility to be always reachable, to immediately communicate emotions and obtain information, creates addiction and attachment (Gomart and Hennion 1999; Jaureguiberry 2003). When we forget our mobile phone we feel anxious, isolated and incomplete; we are afraid of losing opportunities and we are worried because friends and family cannot contact us. Mobile phones mediate, transform and affect the meaning and the use of urban spaces and spatio-temporal habits (such as the habit of expressing feelings in public, which was once relegated to the private sphere). Users also delegate some choices to technical devices (it is the phone mnemonic capacity that decides when to remove the virtual presence of people from one's life by deleting a phone number)

The last chapter by Javier Izquierdo, "The Authentic False: Things inside People", shows the limits and opportunities created by socio-technical assemblages. By studying scientific, legal and political controversies, the author analyses the cognitive and the moral ability to attribute responsibility in the cases when human actions are carried out through the mediation of complex technological systems. Izquierdo

points out the absence of a jurisprudence about rights and obligations, credits and responsibilities attributed to these new techno-scientific bodies, or subject-machines, which are slowly and imperceptibly populating our societies and can easily escape human control.

In conclusion, we can agree with the authors that in a world where social actions and identities are performed and shaped through the use of an interconnected system of technological prosthesis, it is necessary to regard materiality (food, material waste, mobile phones) as the place of a new agency and to urge social sciences and anthropology to take all these assemblages of humans and non-humans as their object of analysis.

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Les Nanotechnologies

(Nanotechnologies)

2009, Le Cavalier Bleu, 127 pp.

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Written by the sociologist Dominique Vinck – professor of sociology of sciences and innovation at the Lausanne University, and former professor at the University Pierre Mendès-France – this very clear book introduces the reader to the controversies associated with nanotechnologies and tries to answer to these questions: What are the nanotechnologies? What are they for? Are the fears related to them