## **Presidential Address**

# STS, ITALIA

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**Abstract** What is the state of art of Science and Technology Studies in Italy? What happened in the last five years? In this paper, the departing President of STS Italia traces the main lines of research of STS scholars in Italy, highlighting the ways in which a scientific field (previously under-represented in the Italian scenario) has gained visibility and substance. In particular, the narration concentrates on the capacity of researchers to build research networks (at both national and international level) actively contributing to the inter/national debate, as well as to question and innovate ways of thinking about technology and the social itself.

**Keywords** Science and Technology Studies; Italy; scientific community; academy; research.

## Introduction

Our policy, and one point: we want to examine the pulsar for the way it is *in hand* at all times in the enquiry. We want to see the way it is 'performatively' objective. We did *not* examine and we want *not* to examine the end-point object for its correspondence to an original plan. We want to disregard, we want *not* to take seriously, how closely or how badly the object corresponds to some original design – particularly to some cognitive expectancy or some theoretical model – that is independent of their embodied work's *particular occasions* as of which the object's production – the *object* – consists, only and entirely.

(Garfinkel et al. 1981, p. 137)

During the joint EASST/4S conference of this year (Copenhagen, 17-21 October 2012), two particularly flattering things happened to me. First, I was invited (in my capacity as President of STS Italia) by the Netherlands Graduate Research School for Science, Technology & Modern Culture (WTMC) to speak briefly on

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the occasion of the 'lunch meeting' organized to celebrate the twenty-fifth anniversary of its foundation and the second edition (again after twenty-five years) of *The Social Construction of Technological Systems* (Bijker *et al.* 1987, 2012). The editors were present at the lunch, as well as some of the contributors to the book and other leading scholars and personalities in the international STS panorama. Considering that I had just started high school in 1987, and that STS Italia did not even exist until 2005, perhaps the reader will understand the pride and satisfaction which I felt on receiving the invitation.

In less institutional and more strictly personal terms, perhaps even more satisfying for me was the fact that one of the first people that I met at the conference (Cornelius Schubert) told me that two people sitting behind him on the plane had spent large part of the flight reminiscing enthusiastically about the EASST conference held in Trento in 2010. Then another person (Miquel Doménech) told me that he had heard the same in his group of Spanish colleagues. To tell the truth, in both cases the comments concerned the quality of the food and the espresso coffee, but given that I had been one of the main organizers of the conference, and that it had absorbed my time for a year, the reader will again understand my pleasure at what I heard. And I hope that science and technology scholars in Italy will be pleased as well, because both episodes were the result of a collective enterprise whereby STS studies in Italy have changed substantially over the past few years, gaining visibility both nationally and internationally. How this has happened I shall seek to explain in the sections that follow.

## I. Signals

Disney: We've got a bleeding *pulse* here (2.0) Cocke: He::y! (4.5) Wo:::w! (1.2) You don't suppose that's really it, do you? (2.0) Ca::n't be:. (Garfinkel *et al.* 1981, Appendix 3, p. 149)

Every story has its founding myth. That of STS in Italy narrates that in 2004, in Paris, during a coffee break at the 4S/Easst Conference, four researchers (or maybe five... founding myths always contain ambiguities), noticing they were the only Italian scholars attending the conference, decided to set up an association and create the Italian Society for Social Studies of Science and Technology (STS Italia). The association was founded with the aim of bringing to Italy a debate as much established and acknowledged at the international level as it was neglected and dis-

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regarded in Italy. Explanation of this situation would take us too far afield, but it is useful to bear in mind that Italian academe (and careers within it) is dominated by 'disciplinary scientific sectors' (*settori scientifico-disciplinari* - SSD). Yet STS (unlike in other countries) have never been one such sector, and their status within other disciplines (sociology, philosophy, history, anthropology, political science) has always been somewhat marginal, when not being regarded with suspicion. This is not to say that STS was neglected in Italy until the mid-2000s (Bucchi 1996, 1997, 1998, 2002, 2003, 2004; Bucchi and Mazzolini 2003; Neresini 1993, 2000; Bucchi and Neresini 2003, 2004; Gherardi and Lippi 2000; Nacci 2000; Bennato 2002; Volontè 2003a, 2005b; Guzzetti 2002a, 2002b; Mongili 1998; Pellegrino 2003, 2005a, 2005b, 2005c, 2005d; Bruni 2004, 2005a, 2005b; Bruni and Gherardi 2001; Gherardi and Strati 2004; Grasseni 2003, 2004), but rather to say that their circulation had been restricted to individual scholars and research niches.

In this context, STS Italia has been an original form of aggregation able to attract researchers who not only share the same areas of research interest but are also willing to meet the challenge of changing current knowledge production and sharing processes in scientific settings. The work carried out to date (through the organisation of national and international workshops and conferences, and establishing dialogue with not exclusively or strictly academic institutions) has made it clear that the breeding ground for Italian STS is the development of opportunities to foster new perspectives and new generations of scholars, especially at a time when the social sciences (not just in Italy) seem to be plunged in a crisis with no apparent way out.

The advent of occasions and arenas for discussion (as well as for identitarian self-representation) has indubitably given major impetus to the formation of a community of scholars and to the evident growth in Italy of a research sector hitherto almost invisible. Nevertheless, because impulses should pulsate, it is necessary to look more closely at what has happened over the past five years in the panorama of Italian STS studies and publications.

## 2. Pulses

Disney: ...(I won't believe it) 'till we get (a) second one. (0.4) Cocke: ...I won't believe it until we get the second one and until ththe thing has shifted somewhere else. (Garfinkel *et al.* 1981, Appendix 5, p. 154)

Personally (and at the risk of neglecting the work of a number of colleagues), I consider *Il senso degli oggetti tecnici* ("The sense of technical objects" - Mattozzi 2006) to be the main impetus behind the 'visibilization', if not the outright institu-

tionalization, which STS were about to undergo in Italy in following years.<sup>1</sup> This book proposed the translations of a number of articles (by, among others, Latour, Akrich, Mol, Woolgar) that have somehow made the history of contemporary STS. It opened with a long Introduction in which the author (a semiotician who had just received his doctorate) for the first time presented to the Italian public, in copious detail, the concepts and keywords by then circulating in STS for around ten years. To be noted is that this happened in a context in which the only Italian translations of "contemporary STS classics' were *Science in Action* (Latour 1987) and *Of Bicycles, Bakelite and Bulbs* (Bijker 1995), both published in Italian in 1998.

Whenever something begins to pulsate, the pulsation repeats itself. Shortly afterwards, therefore, two further publications, in handbook format (Mongili 2007; Parini 2007), provided Italian readers with a systematic overview of two debates difficult to summarize (the relationship between technology and society from an 'ecological' standpoint; the construction of scientific knowledge).

The handbook nature of these publications was symptomatic of another ongoing process: the greater presence of STS-oriented courses on degree, master, and doctorate programmes; and, therefore, also the greater inclination of Italian publishers to invest in such publications. This is further evidenced by the publication (in the immediately following years) of several books testifying to the contribution made by Italian research to topics such as technoscientific innovation (Pellegrini 2008) and technology as a social practice (Gherardi 2008).

Further evidence is provided by a special issue, edited by Federico Neresini (2008), of the *Rassegna Italiana di Sociologia* devoted to STS "inside and outside the laboratory" and, above all, by the growing number of articles testifying to the capacity of Italian STS to participate in the international debate, especially as regards media and the communication of science (Bucchi and Trench 2008; Bucchi 2009; Neresini and Pellegrini 2008; Neresini *et al.* 2009; Castelfranchi *et al.* 2009; Bucchi and Lorenzet 2009; Balbi 2009a; Balbi and Prario, 2010); scientific knowledge production (Volontè 2008); the intersection between organizing, work practices and new technologies in medicine (Bruni 2005; Bruni and Parolin 2009; Perrotta 2008); ubiquitous interaction (Pellegrino 2007, 2008a, 2009a); information systems (De Paoli and D'Andrea 2008a; 2008b; Teli *et al.* 2007; Teli *et al.* 2009); design (Mattozzi and Mangano 2009); and risk and responsibility in environmental choices (Pellizzoni 2010).

These diverse pulsations have given unprecedented impetus to the Italian STS debate and to its visibility. They signal that, independently from STS Italia, social studies on science and technology command the attention, in Italy as well, of a

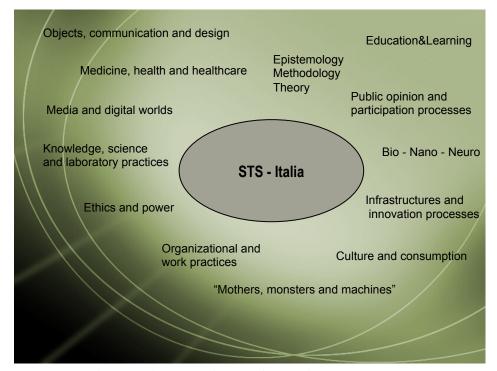
<sup>&</sup>lt;sup>1</sup> For the sake of brevity, in this and the following sections I refer only to publications by Italian authors resident in Italy. This excludes the large number of Italian researchers working in foreign countries who have contributed to the growth of the Italian STS community. I apologize to them, hoping that they will understand the criterion that I have adopted. Nor will I refer to articles published in previous issues of *Tecnoscienza*, because I presume that readers of the journal are already well acquainted with them.

growing number of scholars. Moreover, as well known in physics, directly connected to pulsations is the frequency of motion.

## 3. Frequency of motion

Disney: I– It's growing! Cocke: HH Hehh hehh hehh! (0.8) Disney: (kh) Yeah, that's it! Cocke: Hihh hihh! Disney: By God! We got it! Cocke: Naow, naow! (Garfinkel et al. 1981, Appendix 4, p. 151)

When, in 2010, I was elected president of STS Italia, together with the two newly elected Vice-president (Alvise Mattozzi) and Treasurer (Assunta Viteritti) of the association, we decided to try to map the various areas of interest within Italian STS, asking the people (around 80) whose names were stored in the STS Italia database to indicate their research interests in three keywords. Classification and grouping of these keywords yielded the following scenario:



2010 - Principal topics of interest of STS Italia members

I remember my surprise at finding both such a wide variety of themes and the overall coherence of the research scenario that emerged. I also remember thinking how difficult it would be to translate this scenario into something more concrete than a graphic representation.

Almost three years later, I perhaps have some clues. Firstly, this scenario has been translated into a quantity of studies and publications that would be difficult to summarize here without merely constructing a summary list of citations. I shall therefore do no more than demonstrate the continuity in publication of both handbooks/anthologies (Bucchi 2010; Parini and Pellegrino 2010; Bennato 2011) and research volumes, particularly on the following topics: the media (Balbi 2011a; Neresini and Magaudda 2011); the 'politics of proximity' (Pellegrino 2011); digital cultures and consumption (Magaudda 2012a); innovation processes and the relative controversies (Arnaldi and Lorenzet 2010; Lorenzet 2013, Minervini 2009; Pellegrini 2011; Magaudda 2012b; Neresini 2011; Nicolosi 2011); laboratory practices (Viteritti 2012); the interweaving among technologies, organizational processes and medical practice (Bruni 2010; Parolin 2011; Turrini 2011); a national survey on the relationship among science, technology and public opinion (Bucchi and Neresini 2010; Bucchi and Pellegrini 2011; Neresini and Pellegrini 2012); and critical readings of the relation between neoliberal policies and technoscientific research (Pellizzoni and Ylonen 2012).

Also dating to 2011 is the publication of a special issue of *Etnografia e Ricerca Qualitativa* (edited by Alessandro Mongili and Luca Guzzetti) on "biomedical laboratories, technoscience and ethnography", which further testifies to how STS have gained recognition and autonomy within the Italian social sciences and, at the same time, established relations and dialogue with other scientific communities.

Then founded in 2010 was the journal that you are reading at this moment, whose existence is one of the most tangible results of the vivacity of the debate in progress and the concreteness assumed by the scenario at that time. Again in 2011 the organization of the first STS Italia Summer School (Alghero, 27-30 June) assembled thirty PhDs and post-docs (equally divided on national and international bases) around the topic "Cities, Technologies and Infrastructures".

This year, on the occasion of the fourth STS Italia conference on "Emerging Technologies, Social Worlds" (Rovigo, 21-23 June 2012), 180 scholars (around half of them non-Italian) attended 20 parallel sessions ranging from "Politics of technoculture", through "Working in technologically dense environments", "Design Articulations and practices" and "Internet and new productive paradigms", to "Bodies, technologies, practices and knowledge in biomedicine". I stress the 'mixed' dimension (from the point of view of nationalities and tracks) because I consider it a distinctive feature of the construction process of the Italian STS community. Giving oneself an identity as a scientific community at national level, however, does not mean estrangement from the broader international panorama, nor does it mean closing oneself off within an orthodox research perspective. Rather, it is to become a link able to connect networks and debates that otherwise would never have occasion to meet.

At this point, amid so much scientific production and such wide-ranging debate, we may turn to the current interests of Italian science and technology scholars.

#### 4. Tangential velocity

Cocke: I hope to God, this isn't some sort of artefact of the (uh) instrumentation. (2.0) Disney: My God [ McCallister: never saw it befo:re. (Garfinkel *et al.* 1981, Appendix 4, p. 153)

Several topics have been addressed in recent years in the Italian debate. One of them – perhaps most consolidated at academic level – has to do with the public communication of science and, in general, with the relationship among innovations, media, and public opinion (Bucchi and Neresini 2011b; Bucchi and Pellegrini 2011; Neresini and Pellegrini 2012). This is a classic topic in STS, but it is of interest that in Italy it has been treated especially in terms of the relationship between science and citizens in technoscientific controversies (Bucchi 2010b; Bucchi and Neresini 2011a; Lorenzet 2013), for instance addressing (particularly in recent years) the issues of bio and nanotechnologies (Arnaldi 2009, 2010a, 2010b; Arnaldi *et al.* 2009; Arnaldi and Lorenzet 2010; Bucchi and Neresini 2006; Neresini 2011; Beltrame 2012), climate change (Bucchi *et al.* 2010) and organ donations (Lorenzet and Turrini 2012).

However, perhaps most characteristic of current Italian STS is a certain type of interest in, and attraction to, debates that arise at the borders with other disciplines (and which probably represent the future of STS).

The debate which in recent years has seen STS in Italy merge with organization studies and the sociology of medicine, for example, has given rise to various studies on telemedicine (Gherardi and Strati 2004; Bruni *et al.* 2007; Piras and Zanutto 2010, 2011a, 2011b; Bruni and Parolin 2009; Parolin 2011) and the flirting between humans and machines in hospital settings (Bruni 2004, 2005b, 2008, 2011; Lusardi 2009; Lusardi and Perrotta 2009; Lusardi 2012). The result has been the diffusion (in Italy and abroad) of a curious expression – "technologically dense environments" (Bruni 2005a, 2005b) – which refers to the fact that, in contemporary organizational and work settings, complex sociomaterial practices mobilize the joint action of heterogeneous elements (both human and non-human), blurring the distinction between technological and organizational processes. Still lacking, however, is a thorough analytical definition (when and how is it possible to affirm the "technological density" of an environment?). Nevertheless, the expression has begun to spread (a track on TDEs was present on the 2010 EASST conference pro-

gramme, as well as the one of this year, and also those of the 2011 Colloquiuum of the European Group on Organization Studies and the STS Italia conferences), to the point that other researchers have begun to appropriate and rephrase the expression (Rennstam 2012).

Another boundary debate ongoing in the most recent STS, and which has attracted the attention of Italian scholars as well, concerns bio-objects (Vermeulen et al. 2012) and the forms of re/production of scientific knowledge. The feature shared by studies in this field is their focus on the practices of writing and visualization (and therefore on textual and visual artifacts) that accompany the re/production of research and scientific knowledge (Grasseni 2007; Bellotti et al. 2008; Volontè 2008; Turrini 2011a, 2012; Maestrutti 2008, 2011; Viteritti 2012 see also the Scenario in this issue). They use an approach to knowledge as a situated practice involving the body, the material world and, hence, the aesthetic dimension (Landri 2010; Turrini 2011b; Viteritti 2011). Perhaps also because of the recent Italian law which restricts medically assisted reproduction practices, equally close attention has been paid to the role of the institutional and organizational dimension that serves as the background to bio-objects (Perrotta 2011; Gherardi and Perrotta 2011). Not coincidentally, this will be the theme of the 2013 special issue of Tecnoscienza (Re-conceiving Life in the Labs: The Emerging Meanings of Cells in the Italian Reproductive Biomedicine and Beyond, edited by Manuela Perrotta).

A further debate of close interest to Italian scholars has developed at the intersection among STS, cultural studies, and design studies (Shove et al., 2007). Here the concern is with: a) practices of consumption and appropriation of technologies and their translation into social practices (Magaudda 2006, 2008, 2010, 2011a, 2012a, 2012c; Piccioni 2010; Pellegrino 2008b, 2009b); b) reconstruction of the 'biographies' of objects (Burtscher *et al.* 2009; Balbi, 2009b, 2010, 2011b) and methodologies for the analysis of design-in-use (Mattozzi 2010, 2011; Marian and Mattozzi 2012; Volontè, 2010). In both cases, the attention centres on the object as a part, result, and generator of a broader network of practices and relations in which consumers/users perform a central role and reconfigure themselves as 'prosumers'.

Moreover, the attention to users and practices of re-appropriating and hacking technological devices and innovations is particularly widespread in the research sector that mixes information systems, participatory design, and discussion of property rights on software (De Paoli and D'Andrea 2008a; 2008b; De Paoli *et al.* 2008; De Paoli *et al.* 2012; Teli 2012; Hakken and Teli 2012) and scientific innovations (Delfanti 2010, 2011, 2012, 2013; Delfanti and Söderberg, 2012). Whilst attention, therefore, centres on software or genome sequences (and the property rights connected with them), the shared feature in this case is an emphasis on the political dimension inherent in scientific knowledge, in technologies and, above all, in the dynamics that regulate the circulation and use of ideas and artifacts. Moreover, given the specificity of the methodological problems that the study of digital worlds and interactions raises for the social sciences, this sector of inquiry is at present characterized also by explicit attention to current survey techniques and

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methodologies, especially in cyber-ethnography (De Paoli and Teli 2011; Teli *et al.* 2007) or, more generally, in digital worlds (Arvidsson and Delfanti, 2013).

As it has also happened at international level (Guggenheim and Söderström 2010) a lively and innovative line of inquiry has arisen at the boundaries among STS, sociology of the territory, and urban geography. Two research lines have proceeded in parallel: one centred on the interrelations among institutions, territory, technology and citizens (Pellizzoni 2010; Minervini 2009); the other on a view of the city and space as networks of relations among heterogeneous elements (Sonda *et al.* 2010; Coletta and Gabbi 2013; Brighenti 2009). Whilst the former redefines the concept of sustainability (see the Symposium of issue no. 2/2012 of *Sociologica* edited and introduced by Luigi Pellizzoni on "Reassessing Sustainability"), the latter revises the category of 'city' through a rhizomatic reading of space.

Last but not least, also the debate that looks at gender and technology as intertwined practices (Haraway 1996), attracts in the interests of Italian scholars (Cozza 2009a, 2009b, 2011a, 2011b; Perrotta 2009, 2010)

If there is a common denominator in all these boundary conversations, it is a methodological inclination of ethnographic, participatory, historico-documentary kind, or at any rate intended to furnish a detailed description of the logics, processes and practices that weave technology and society together.

The tangential velocity assumed by STS in Italy prompts the following final remarks.

## Final remarks: tomorrow now

Disney: Now the fun *begins*, we've got to get this::, (0.6) We've got to write out some sort of a program to (0.3) to *reduce* this tape, (and have the whole lot go in), so, () [ Cocke: (I don't think we need) to reduce the damn tape. (Garfinkel *et al.* 1981, Appendix 5, p. 157)

When I began writing this article some days ago, I thought that it would not take me too much time. I had chosen the type of narration that I wanted to adopt, and I believed that I had a sufficiently clear idea of the geography of Italian STS and its developments over the past five years.

Contrary to my expectations, assembling a systematic account of STS in Italy proved to be a rather complex task, both because of the sector's high 'scientific productivity' of recent years, and because of the heterogeneity of its topics and approaches, which would have required much more detailed illustration than that provided here in an attempt to describe a debate still developing. In this regard, I should specify that my reconstruction is inevitably partial and has probably favoured the authors and lines of inquiry that I personally find most congenial.

I should also emphasise that, notwithstanding the enthusiastic and celebratory tones that I have used (which derive from the enthusiasm of someone who has the impression of participating in an ongoing process), the status of STS in Italy is still far from being 'stabilized'. Suffice it to cite the fact that the list of 'class A' scientific journals compiled by the National Agency for University and Research Assessment (National Agency for the Evaluation of University and Research, AN-VUR) includes (for the social sciences) none of the main international journals of Science and Technology Studies (whereas numerous Italian journals not even included in the international databases receive an 'A' rating from the ANVUR). Moreover, the scenario emerging from the current process of assessing universities and research in Italy seems to be one of adherence to the *status quo* and of the further sectorialization of knowledge, with the consequent risk of disqualifying, if not stunting at birth, what is emergent and interdisciplinary. And STS in Italy still share both these features. This scenario is of ill omen for our scientific community, which by acting crosswise with respect to the rules and rituals of Italian academy (but, as I have tried to show, in substantially and incisively manner at the level of research and scientific productivity), has in recent years increasingly acquired visibility in Italy and abroad. It is indeed so for any scientific community that seeks to conduct research in an open, innovative and vibrant manner.

The future of STS in Italy (and, maybe, not only in Italy) will thus continue to depend on the capacity of researchers to build research networks (at both national and international level) actively contributing to the inter/national debate, as well as to question and innovate ways of thinking about technology and the social itself.

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