

What Can We Learn from the History of STS in Italy? A Few Hints for the Future

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Abstract: By recalling his own career as an historian of science and technology, the author sketches the history of Science and Technology Studies in Italy from their early steps in the 1970s and 1980s. He highlights the ways in which the field has gained visibility and substance in the Italian context, but also pointing out the constraints and hurdles that still must be overcome to consolidate it. In particular, the author underlines how the traditionally rigid disciplinary partitions of Italian academia and the nationally centralized system of Italian universities have hindered, and still hinder, the institutionalization and the potential impact of STS south of the Alps.

Keywords: STS; History of Science; Italy; Interdisciplinary studies; academia.

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As an historian of science and technology with an interest in STS dating back to the early 1970s, I want to contribute to this anniversary issue of *Tecnoscienza* with some reflections combining a long-term perspective on the field and a few hints on how to sustain its further development in the future. The reflections and the hints, hopefully, will benefit from a less-than-cursory experience in the joint venture of historians of science and STS scholars in different countries over the past fifty years.

A former engineering student with a passion for the history and philosophy of science, in 1970 I ended up with a philosophy of science “laurea” degree, based on a dissertation on a history of science topic with some significant social implications, that I addressed from a moderate socialist standpoint. There were no substantive academic opportunities for historians of science in Italian universities in those days. Unhappy with the kind

of logical positivism prevailing among Italian philosophers of science, I was attracted by what I regarded as the promising, recent developments in the history of science as practiced in the United Kingdom and USA. Such developments displayed a growing attention for the social history of science and for what were then called “science studies”. In 1971 a new journal by that name – renamed *Social Studies of Science* a few years later – was launched in London. The two editors were from two different, recently established research units pursuing the kind of topics I found fascinating. Roy MacLeod was based at the time at the University of Sussex, where the Science Policy Research Unit (SPRU) had been established in 1966. David Edge was at the University of Edinburgh, where the Science Studies Unit had been created in 1964, thanks to a grant from the Wolfson Foundation. A few years earlier Edward Shills, an American sociologist with an interest in science policy who participated on both sides of the Atlantic in what was later called the cultural Cold War, had established the journal *Minerva. A Review of Science, Learning and Policy* (1962).

In the early 1970s another, significant playground of the cultural Cold War was launched that proved important for the early history of STS. It was supported by UNESCO and cultivated by historians and sociologists of science interested in a dialogue across the Iron Curtain. The 13th International Congress of the History of Science, meeting in Moscow under the auspices of UNESCO in 1971, saw the formation of an International Council for Science Policy Studies whose members represented institutions ranging from Paris, Harvard and MIT to Moscow and India, as well as scholars from western and eastern Europe and Latin America. There were no Italians on the Council. One lasting product of the initiative was a fascinating, massive volume published by SAGE in 1977 under the title *Science, Technology and Society. A Cross-Disciplinary Perspective*. Edited by Ina Spiegel-Rösing and Derek de Solla Price, the book is regarded as the first of the several STS “handbooks” we are now familiar with (Spiegel-Rösing and de Solla Price 1977).

Back in 1971, another seminal book in the field had been published by Jerome R. Ravetz, then at Leeds University: *Scientific Knowledge and its Social Problems* (Ravetz 1971). In the meantime at University College, London, and other British universities, the Wellcome Trust – a research-charity established by an American-born British pharmaceutical entrepreneur – supported the introduction of research units and teaching positions devoted to the social history of medicine and human health. University College already had a Department of History and Philosophy of Science and in 1994 it became today’s Department of Science and Technology Studies.

Nothing comparable was happening south of the Alps in those same years. Within the slow-moving, centralized, ministry-approved, Italian hierarchy of academic disciplines, it was not until 1979 that there were unambiguous signs of the history of science being recognized as a new field. In the national academic context, the social history of science often met

with skepticism bordering on hostility.

However, thanks to frequent travel and a 1979 scholarship from the British Academy-Wolfson Foundation that I spent in London, in 1980 I was asked by Roy MacLeod to write a “country report” for *Social Studies of Science* focusing on “The history and social studies of science in Italy” (Pancaldi 1980). The burden for the author on such an occasion was to try to explain to foreign colleagues why – despite the often vibrant, occasionally fierce Italian public debates on “science and society”, often involving *internalist* versus *externalist* historians and natural scientists, many inspired by a Marxist agenda – no new research units, journals or other significant publishing initiatives devoted to the social studies of science were being launched.

It took a few years, and some flank movements on my side, to convince senior Italian academics that there might be room at our state-run universities for the kind of social history of science that I was practicing. Having secured a tenured position at home, I was able to expand the international networking that appeared to me the main way to develop the convergence of the history of science and social studies of science, that I found so stimulating in the works of a growing number of British and American colleagues, and help circulate it in the peninsula.

In 1986, a Fulbright scholarship allowing me to spend a semester as a visiting scholar in the Office for History of Science and Technology at the University of California, Berkeley, offered additional yarn from which to weave experiments at networking and institutional change. The Office had been created in 1973 with the aim, among others, of maintaining close ties between historians of science and the powerful natural sciences community for which Berkeley was known worldwide. John Heilbron, trained as a physicist and head of the Office, had worked as Thomas Kuhn’s assistant. Heilbron was later critical of Kuhn’s work and influence, but in those years he edited a journal, *Historical Studies in the Physical Sciences*, that at its launch in 1969 was intended by founder Russell McCormach to pursue “the synthesis of the intellectual and social history of science that must come” (McCormach 1969, viii). Taking the helm of the journal in 1980, Heilbron himself had declared: “McCormach’s resolve to bridge internal and external history has entered the ethos of the profession...” (Heilbron 1980, ii).

In Berkeley in 1986, in dialogue with John Heilbron, the idea developed of establishing an International Summer School in History of Science along the lines of similar schools popular among physicists. Beginning in 1988, the Summer School met in Bologna, Uppsala, and Berkeley in rotation, with Paris to be added later. Of the scholars in charge of the school, two were born before WWII (Heilbron, Berkeley, and Tore Frängsmyr, Uppsala), and two after the war (Pancaldi, Bologna, and Dominique Pestre, Paris). The four represented, as it were, two different generations of scholars, with the latter feeling much closer to the social studies of science and STS that were putting down roots in many English-language universities.

The students admitted to the school – doctoral students and post-docs – reflected the agenda and moods of a somewhat divided but thriving field of study. The school's ten one- or two-week-long sessions held between 1988 and 2006 attracted more than three hundred students from eighteen countries. Those attending the 2004 School in Bologna will long remember the passionate discussions that followed Dominique Pestre's lecture on "Thirty years of science studies" (Pestre 2004) and Jan Golinski's on "Making natural knowledge" (Golinski 1998).

For the young Italian scholars in attendance, the school brought networking opportunities and the welcome breath of fresh air that lively international meetings carry with them. But of course, more was needed for the field to catch on and begin growing roots within the Italian university system. Only the creation of research units and teaching programs specifically devoted to the new field could offer hopes of establishing it in a lasting way. The example provided in those years by universities abroad was clear. In 1988, the MIT Faculty approved their new STS doctoral program. Still active today, the program partners with historians and anthropologists to train researchers in the "historical, cultural, social, political and economic dimensions of science, technology and medicine across the globe."¹ The 2002 establishment of the Harvard program on "Science, Technology & Society" sent a similar message. Other such programs currently active in the USA include the Berkeley Ph.D. in Science and Technology Studies, and similar programs at Cornell, Wisconsin-Madison, Michigan, and Virginia Tech.

In Italian universities, Ph.D. programs in any discipline were first introduced as late as the mid-1980s, when I was just being appointed as professor of the History of science at the University of Bologna, without the requirement of a Ph.D. Convinced that doctoral studies were indeed a crucial experience and cherishing the prospect of writing my next book in English, I took the step – unusual for a professor – of becoming a doctoral student again. I earned my Ph.D. (*DPhil*, as they call it) from the University of Oxford under Robert Fox, who practiced a history of science that I found congenial as it combined close attention to scientific content and a deep awareness of institutional and social contexts.

My efforts at networking and institutional bricolage continued. In 1991, I took advantage of the euphoria generated in Bologna by the recent festivities celebrating 900 years since the foundation of the university to launch an International Centre for the History of Universities and Science. Still in operation, the Centre allowed the kind of regular hosting of foreign visiting scholars that the Summer School could not provide. It also made it somewhat easier to attract local, national, and European funds to support young researchers interested in exploring new avenues of research. It took many years, however, to convince colleagues at the University of Bologna that the most urgent step needed to catch up with what was happening abroad was to launch a doctoral program adopting some of the features characterizing the STS programs prospering elsewhere. A full academic

year spent at MIT and the Harvard Department of History of Science thanks to a Dibner Fellowship in 2002-2003 confirmed my convictions. Back in Bologna, a small step in the hoped-for direction occurred in 2005 when cultural anthropologists agreed to host an annual course of lectures on the Anthropology of Science and Technology (in 2009 the name was changed to Social Studies of Science). The course became quite popular among students from both the humanities and the natural sciences.

I pursued a connected line of intervention as a member of the national and local committees selecting candidates for new academic positions in Italian universities. This consisted in attracting back to Italy several Italian colleagues who had completed their studies abroad in areas akin to the social history of science and STS. As part of the same strategy, I also encouraged several of my students to continue their doctoral studies abroad.

In 2007, finally, a new Ph.D. program was launched at the University of Bologna, hosted by the department I was attached to: the Philosophy Department. The title adopted – Science, Technology, and Humanities – reflected the program’s aspiration of combining the humanities, deeply rooted in the local tradition, with the natural sciences and technology. In its early days faculty members supporting the program came from physics, mathematics, the biomedical sciences, engineering, and economics as well as philosophy and the humanities. The program also benefited from cooperation agreements with scholars from the Universities of Exeter and Konstanz. The new Ph.D. program attracted a fair number of students from several countries each year. As time went by, however, the combined pressure exerted by both local and ministerial diffidence towards the interdisciplinary character of the program – atypical vis-à-vis the deep divide separating the humanities and social sciences from the natural sciences and technology within the institutional setting of Italian universities – prevailed. Such pressure eventually led the denomination of the program and the composition of its faculty to be changed. Currently, “Philosophy and Science Studies” is only one of the three curricula available to students, and the program no longer maintains close ties with faculty from outside the humanities and social sciences.

Around the year 2000, a new source of potential support for projects pursuing the kind of interdisciplinary agenda sketched above became available from the European Union through its cultural programs. My own experience with one such program, “Culture 2000”, was satisfactory on several accounts. It made it possible to organize conferences and publications on “nature, culture and identities” through a joint initiative by scholars in the social and natural sciences belonging to the universities of Heidelberg, Louvain-la-Neuve, Montpellier and Salamanca, as well as Bologna.

Another major, potential source of support for the kind of interdisciplinary research agenda I am talking about materialized with the creation in 2007 of the European Research Council. With the declared goal of sustaining research in all fields of science and scholarship, and having adopted a system of panels and disciplinary sectors for the selection process more

frugal and flexible than the one in force in Italian universities, the ERC had the potential to facilitate comparatively new interdisciplinary fields such as STS make their way south of the Alps. In recent years, undoubtedly, the competition among Italian universities in their effort to attract ERC recipients and funds has allowed some scholars with substantial experience in STS abroad to return and secure tenured positions in Italy. It is probably too early, however, to say whether the inflow will have an impact on the traditionally rigid disciplinary partitions of Italian academia.

Conclusions

So, what can we learn from the history of STS in Italy? Are there any hints to be drawn as to how best to sustain its further development in the future?

In the Italian context, more than elsewhere, young academic fields need a pouch if they are to conquer spaces in universities and research institutions. In the early steps discussed above, in the 1970s and 1980s, the ‘kangaroo’ offering STS a lift was the history of science which, in turn, was taking on a degree of autonomy from the philosophy of science and the history of philosophy, fields that at the time benefitted from their earlier establishment in Italian universities. In more recent years, if we judge from surveys such as the one outlined by Attila Bruni as President of STS Italia in 2012, the kangaroo supporting the penetration of STS in Italy has been, above all, sociology (Bruni 2012).

Useful and indeed necessary as they are, lifts such as these also bear certain costs. During the earlier period, Italian scholars interested in STS had to either publish abroad or adjust to the topics, style and jargon prevailing in the kangaroo disciplines prevailing in Italy. In the more recent season of Italian STS, something similar is happening with sociology.

The situation described entails additional costs. Several of the early STS research centers and doctoral programs established in English-language universities were, and often still are, the fruit of joint initiatives by scholars from the humanities, social sciences, natural sciences, engineering, and medicine. Those centers and programs continue to benefit from a comparative ease of movement among the different fields made available to doctoral students and faculty members when they build their careers in those universities. That does not apply to Italian STS in the same measure. A significant portion of the literature produced by scholars active in English-language STS centers and programs is conceived keeping in mind the comparatively broad audiences constituted by scholars and readers from a range of different disciplinary backgrounds. A similar goal is achieved in those countries through the policies pursued by the main university presses. When transforming a Ph.D. dissertation into a book meant for those presses, scholars are expected to adopt arguments and a language appropriate for broader audiences. The growing number of articles that

English-language STS scholars publish in magazines and websites meant for a general public is producing a similar result. Once again, such conditions do not apply to the same degree within Italian academe or among Italian publishers.

On a deeper level, the power accumulated by the kangaroo disciplines through the nationally centralized, rigid hierarchy of disciplinary arrangements in force in Italian universities has the effect of discouraging younger generations of scholars from adopting the more innovative, ambitious goals typical of comparatively new fields, like STS. When it comes to launching or supporting new STS initiatives, the all too limited autonomy that individual state universities are willing to claim from the ministry in Rome and from the national evaluation agency represents an additional and powerful constraint. Together with the permanently inadequate, public and private resources devoted to scientific research, this is yet another circumstance pointing to the fact that – as I have argued elsewhere (Pancaldi 2020) – the centralized, imagined national scientific community that Italian elites have built since unification has backfired.

Are not topics such as these urgently deserving to be studied by Italian STS scholars?

While waiting for the national problems to be addressed, we can find some relief in a trend that involves us as members of the broader, international STS community. A recent survey of the articles published in *Nature* over the past fifty years found that “scientific work is ever more becoming a mixture of disciplines”, and “the scientific endeavor increasingly integrates across boundaries,” including the social sciences and humanities (Gates et al. 2019, 34). Indeed, this trend appears to be confirmed by the attention that journals such as *Science* have paid recently to the work of scholars such as Bruno Latour.

There was some emphasis in the title – “The Whole World is Becoming Science Studies” – adopted for Latour’s 2018 interview published in *ESTS* (Mazanderani and Latour 2018). The ecological crisis and debates on the Anthropocene were mentioned at the time to support the message. Writing today, we would of course add the Covid-19 pandemic to that list, and the message would appear less emphatic than it did two years ago. For us here, however, the question remains: how should we best equip Italian STS to face the multiple challenges that defy the disciplinary and institutional niches on which our universities and we ourselves have relied for so long?

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¹ <https://sts-program.mit.edu/academics/graduate-program/> (Accessed September 7, 2020).