Amateur Versus Experts: Politics, Citizenship and Science

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ABSTRACT
Scientific and technological expertise is currently experiencing a crisis. The public shows a growing distrust in many aspects related to the techno-scientific development. The birth of that suspicion begins after World War II but has transformed in the past few decades. In this paper, the authors examine how that doubt has specific features in the present moment. Also, there is a reaction to propose another way to make scientific and technological research where there is a more participative spirit. These changes reshape traditional ideas on science, technology and progress. Amateur efforts in science and technology maybe are opening the possibility of a change for these activities and information technology seems to support these efforts. If these can be considered, a consistent trend is difficult to predict.

Keywords: Communities of Knowledge, Ethical Science, Expertise, Lay Science, Science Policy

DISTRUST KNOWLEDGE
2nd World War showed what unleashed scientific and technological development could produce. Reactions among intellectuals, scientists and technicians produced at least some more cautionary approach to this endeavor. Pughwash movement, environmentalists, STS activism, consumer’s associations and academic work among others count as more reflexive ways to deal with something that improved human condition but at the same time threatened the existence of human species itself. Conviction that progress does not happen spontaneously become more and more accepted. But last decades have changed in an important way. Take for instance the pertinence of STS studies. In 1994 Ivan Illich, one of the most important thinkers in this field, suggested that STS programs had no reason any longer. The rationale for that claim was based in different arguments. First activism abandoned STS a long ago. Every university, college or higher education institution had a STS program already so there was little room for activism since STS was transformed into an academic question (Duden, 2003). Main goal for STS also was achieved; there is a general distrust for Science and Technology among the public but at the same time the idea we do not have more opportunities than those given by Science and Technology themselves. Illich characterized for foreseeing future scenarios such as education and lack of proportion in our technological society. And some facts seem
to support his claims. An interesting survey made by the European Union (Euro barometer) showed how Europeans distrust biotechnology in a significant degree: 54% of Europeans consider that those technologies will not improve their lives. Also about 90% of the Europeans believe that we are about to confront a deep environmental crisis and we are feeding the problem with present consumption system. There is a vast array of technologies that create concern among the public: reproduction technologies, bioengineering and genetic modified organism, pollutants, nanotechnologies, relaunched nuclear energy programs and so on. There is a diffused and general idea that we will confront new problems according to the emergence of new technologies. So progress and wellbeing is not something that happens automatically. But somehow it seems effortless to fight against those facts. The same way there is something as a diffuse environmental worry everywhere also there is the conviction that science and technological advancements do not translate into a promising future.

Experts are under suspicion, many cases have revealed a lack of honesty or accuracy and science and technologies are seen more a more as the first place where problems take place. Chernobyl for instance is one of these paradigmatic cases in the public mentality. The idea that nuclear risks could be managed vanished in 1986. Chernobyl polluted more than Nagasaki and Hiroshima bombs together and the core of one of the affected reactor was about to melt (Burlakova & Naidich, 2006). Experts do not agree on the final result on that accident but it seems that almost all Western Europe received radiation, from Sweden to Spain. So if 1989 was the end of communism (the demolition of the Berlin Wall), before general public experienced how certain catastrophic claims made by supposedly amateur experts such as ecologists, could become true. Facts developed in a frantic way around the Ukrainian nuclear power plant. Each new coming from the extinct URSS showed a madness dealing with potentially one of the biggest civil accident in history. Even today experts contradict about how dangerous has been and how to measure the amount of victims. After Chernobyl, things changed.

Expertise has its inner problems; an expert can be well trained and credited inside labs but nothing guarantees the same qualification outside the lab, in the middle of public and political life. Lack of confidence grows when more and more experts become part of corporations and groups of interest (something that Rachel Carson tried to fight in the far sixties). Public manifests its worries about the lack of information and a growing distrust on governments and experts. One recent case is the A flu virus and all the campaigns and discussions. According to statistical sources 80% of Europeans manifests do not trust either in governments or in experts. It is an old dispute how to achieve objectivity and if experts are the real source for such. Sometimes fights among different opinions transform expert’s report in part of the problem. As a result the distance among the technological elite and lay people grows. For instance, a number of world meetings dealing with the global climate change have transformed scientific data into bitter wars among experts, environmental groups, companies and so on. For instance, Kyoto, Johannesburg and Rio do Janeiro meetings are evidences of that struggle. Scientists, politicians, activists, journalists etc., take part on discussing the evidence of the climate change; journals, articles, data etc. Scientific theories do not relay in a balanced and calm discussions. Many times arguments are accusation of fraud or vested interests or hidden political agendas. There are parties that fight each other in the media or in political terms. Therefore it is extremely difficult to consider science only as something done in labs, isolated from society completely. Wall labs become diffuse; inside and outside merge. Somehow the impression is as if a global experiment is being carried out where we are part of that experiment. So it is easily understandable why so many people want to take part in its design. If this is true there is another consequence that follows: traditional split among nature and culture becomes more and more difficult: where ends one and begins...
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