Translating innovation with information infrastructures: the case of TED as a valuation device

Introduction

This article aims to investigate the TED infrastructure for translating Science and Technology (S&T) projects (Callon, 1981, 1986; Law, 2006). The analysis uses the concepts of recognition (Honneth, 2012) and the public sphere as interpretative lenses for analyzing the dynamics enforced by or emerging from the TED infrastructure, questioning their relationship to selection and outcomes of presenter-related S&T projects. The term '*translational research*' appeared in Pubmed for the first time around 1993 (van der Laan & Boenink, 2012). Translational research aims to identify and challenge the "translational gaps'' (T gaps) hindering the transformation of discoveries in the life sciences into societal profit from basic research (van der Laan & Boenink, 2012). Since then, different types of gaps have been identified and systematized in translational methods (Dougherty & Conway, 2008). As for the management research, translational issues have been pointed out as relevant and critical factors by Shapiro, Kirkman, & Courtney (2007) within the Academy of Management (AOM) research community. They also have identified and investigated two different types of translational problems, suitable to be solved for an effective impact of management research on practice (Shapiro et al., 2007): "*lost in translation*" (a failure to find the right way to transfer research results to practitioners using their language, understanding, and responding to their needs) and "*lost before translation*" (a failure to identify an appropriate and systematic translation process similar to the one leading from "bench to bedside" in life science).

Taking these issues into account, a public sphere-related phenomenon has emerged in the last 10 years that has not yet been considered by translational research: the rise of TED Talks. Indeed, these formatted talks contribute to translating science projects in general and more specifically those projects related to technological innovation. Given that a digital platform is a relevant component of the diffusion of TED talks, these talks can be considered information infrastructures. Furthermore, a TED talk could be considered to be a valuation device insofar as this type of talk has the potential to impact the "value" of a S&T project that is presented in this venue.

In what follows we first discuss public speaking and the digital public sphere as the background for the emergence of a phenomenon like TED. We then consider translation, valuation and information infrastructure issues. Finally, we analyse the TED Talks infrastructure. Conclusive remarks and discussion of future work conclude the article.

Public speaking and the digital public sphere

Public speaking in the West has its roots in ancient Greek and Roman rhetoric. Rhetoric is considered to be the "art of persuasion" and its practice is dependent upon context. For example, a speech given in a courtroom will not be delivered in the same way as one given during a rally. Public speaking acts serve four basic purposes: to *reaffirm cultural values*, to increase democratic participation, to bring about justice and to *promote social change* (Alberts, Nakayama, & Martin, 2014).

With the increasing presence of the media as a place where ideas are circulated and debated, increasing importance has been placed on the "art" of public speaking. The presence of the media means a larger, more diverse public, which will change the delivery and content of a speech. The importance of non-verbal communication in the public's perception of John F. Kennedy and Richard Nixon during their televised debates in 1960 is only one illustration of this. A timelier example would be the popularity of the TED talk and the proliferation of affiliated events around the world.

The concept of the public sphere can be applied to analysing public speaking acts, such as TED talks. According to Habermas (2003), the public sphere is both a physical and metaphorical space where public opinion is formed outside of the structure of the State and the private sphere represented by the family. It is an intermediary space. The public sphere can be conceived of as a network of people, physical places and media outlets that circulate ideas that are debated in a rational and critical manner. Habermas (2003) retraces the evolution of the public sphere and he reaches the conclusion

that the original "bourgeois public sphere" has been distorted, thus public discussion has been turned into a commodity (Scannell, 2013). In other words, "*Discussion, now a 'business', becomes formalized*" (Habermas, 1989, quoted Scannell, 2013). The blame for this transformation is in part placed upon the media and the commodification of cultural goods as a byproduct of a capitalist system. While the public sphere may have become polluted, it still exists although it does not resemble Habermas' Enlightenment period bourgeois public sphere. Ideas are still circulated, debated and discussed. That said, the advent of the Internet has further transmogrified the publicness of the public sphere into publicity (Scannell, 2013) while increasing the public's ability to join in the discussion. More participation in the public sphere could potentially lead to an increased circulation of ideas. That said, the rationality of the discussion can, of course, be called into debate.

Translation, valuation and information infrastructures

The ideas and perspective adopted in this article rely on the tradition of studies of sociology of translation (Callon, 1980, 1986; Law 2006) which we have extended by considering the concepts of recognition (Honneth, 2012; Iser, 2013), and information infrastructure (Ciborra et al., 2000; Hanseth & Lyytinen, 2010; Star & Ruhleder, 1996). We use Latour's perspective of translation: "a relation that does not transport causality but induces two mediators into coexisting" (Latour, 2005, p. 108), which "modify the meaning or the elements they are supposed to carry" (Latour, 2005). The concept of translation has been connected to and is relevant for the study of infrastructure as a relational concept. That is, an infrastructure becomes real in relation to organized practices when the tension between local and global is resolved (Star & Ruhleder, 1996; Star, 2002). Accordingly, infrastructure has been extensionally defined as being characterized by the following dimensions: embeddedness, transparency, reach or scope, learned as part of membership, linked with conventions of practice, embodiment of standards, built on an installed base, becoming visible upon breakdown, fixed in modular increments, not all at once or globally (for a full description of each dimension we refer the reader to Bowker & Star, 2000; Star & Ruhleder, 1996; Star, 1999). These dimensions also make up the constituents of the working definition of information infrastructures (IIs) provided by Monteiro et al. (2012, p. 576), who define them as "characterized by openness to number and types of users (no fixed notion of 'user'), interconnections of numerous modules/systems (i.e. multiplicity of purposes, agendas, strategies), dynamically evolving portfolios of (an ecosystem of) systems and shaped by an installed base of existing systems and practices (thus restricting the scope of design, as traditionally conceived). IIs are also typically stretched across space and time: they are shaped and used across many different locales and endure over long periods (decades rather than years)."

Compared to other kind of infrastructures, information technology (IT) components and capabilities provided through platforms are relevant to IIs, therefore, they are recursively constituted by other infrastructures, platforms, applications and IT capabilities (Hanseth & Lyytinen, 2010). For IIs, translation has been coupled with the concept of inscription, due to the fact that like a film script technical objects define a framework of action (Akrich, 1992) where technical functions become associated with the activity of social agents (Kallinikos, 2012). Taking these issues into account, IIs can be considered symbolic fields, gatekeepers in the production and the cultural valuation of symbolic goods and social practices, determining social status and class (Bourdieu, 1979). Consequently, they can become the subject of analysis from the perspective of the sociology of valuation (Lamont, 2012) focusing, on the effects of IIs on legitimation and recognition, for example. In this paper, we focus on the latter concept.

Recognition has been defined according to three main dimensions: equal *respect* awarded to all agents capable of autonomy; *esteem* due to one's achievements, emphasizing difference and the uniqueness of specific and cultural features; recognition of concrete individuality as *love and friendship* (Iser, 2013). Further elaborating from the Hegelian argument that we gain self-consciousness only through a process of mutual recognition, Brandom (1994) claims that this elementary form of recognition, on the one hand, allows for the creation and preservation of a subject's identity, granting others the status of an epistemic authority; on the other hand, it denotes a basic normative attitude and allows one to build a normative space of reasons, commitments and entitlements, enforcing the subject as being capable of responsibilities and exercising authority (Iser, 2013). Taking theses issues into account, it is worth noting that Honneth (1996) points out distinct stages of recognition along which individuals gain self-confidence, self-respect and self-esteem.

TED

The TED (technology, education, design) conference was cofounded by Richard Saul Wurman in 1984. It was meant to be a one off conference which brought together influential people in the areas of technology, education and design. In 1990, the second TED conference was organized and from then on, the conference was held twice a year. Wurman curated TED until 2000 and then sold it to UK entrepreneur, Chris Anderson (not to be confused with writer by the same name who is also involved in TED-like projects). Anderson coined TED's tagline, "ideas worth spreading" (Heller, 2012). In 2006, the TED website was launched and it currently hosts a selection of over 2000 talks rated with categories like "jaw dropping" and "beautiful".

While the TED organization offers more than just talks, the talks are what they are best known for. A typical TED talk lasts 18 minutes. Close attention is paid to not just the content, but also the narrative structure and delivery. Speakers are provided coaches so as to deliver high impact talks.

People present official TED talks at a limited number of venues, either at one of the two main conferences, or at the TED global conference. TED then carefully selects which talks to upload onto their website. Viewers are able to stream the talks, or download them. And, like most sites on the social web, viewers are able to interact with the talk by liking it, commenting on it, sharing it and rating it (Sugimoto & Thelwall, 2013).

There are numerous other TED-branded venues where people can give talks, such as TEDx events, TEDsalon and corporate TEDx events. In actuality, however, the link between these events and the official ones is tenuous. Still, the best TEDx talks do appear on the official TED website. There is, however, far less interactivity available to the viewer in the case of TEDx talks.

Conclusion

Based on Habermas's definition of the public sphere, as an intermediary space where public opinion is formed, TED can indeed be considered to be part of the digital public sphere. The TED infrastructure is a symbolic field where individuals express their ideas in the form of TED talks which are then opened up for discussion by virtual viewers at a later date. Such participation helps form public opinion and is fundamental to TED's main goal, spreading ideas. Thus, it is possible to use the broader concept of *information infrastructure* (Star & Ruhleder, 1996) to frame discussion of TED. As such, it is possible to analyze the TED II in terms of its gatekeeper function, specifically in relation to recognition based valuation (Bourdieu, 1979; Honneth, 2012; Lamont, 2012). Furthermore, considering its digital components, TED can be analysed as a digital infrastructure, which as pointed out by Henfridsson & Bygstad (2013) actually connects three types of mechanisms: *situational mechanisms* (macro–micro level, explaining how the infrastructure enables and constrains its various components), *action-formation mechanisms* (socio-technical action, explaining how desires and beliefs generate a specific action), and *transformational mechanisms* (micro–macro level, explaining how different components interact to produce an outcome) (Henfridsson & Bygstad 2013).

These concepts constitute our theoretical framework for the empirical analysis to be carried out as future work. Currently, based on this framework, we have begun an analysis of the TED digital infrastructure and a series of semi-directed interviews of participants in various TEDx events in Europe and the United States who have given talks about S&T projects.

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