CANDID
Checking Assumptions aND promoting responsibility In smart Development projects

Deliverable:	5.2
Title:	The Power of discourse
Work package:	5
Due:	M11
Submitted:	21/12/2017
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Type:	Report

Full title: The Power of discourse

Acknowledgements: The co-authors of this report, Maria Xenitidou[1] and Kristrún Gunnarsdóttir[1], extend their gratitude to CANDID colleagues and partners: the coordinating team in Bergen[2], Kjetil Rommetveit and Sissel Aasheim, and the Module leaders, Robin Williams[3], Niels van Dijk[4] and Daniel López [5], with (*alphabetically*) Sara Degli Esposti[5], Bruna De-Marchi[2], Katja de Vries[4], Miquel Domenech[5], Raphaël Gellert[4], Dunajcsik Maxigas[5], Giacomo Poderi[2], Charles Raab[3], Israel Rodriguez[5], Antti Silvast[3], Alessia Tanas[4], Nora Vaage[2] and Brian Wynne[2].

We also thank all the peers and other participants who have contributed so far to the CANDID communications.

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This document is a draft in preparation for submission to Discourse & Society.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 732561. Work programme ICT-35-2016: "Information and Communication Technologies: Topic: Enabling responsible ICT-related research and innovation".

Contents

1. Introduction

This report constitutes deliverable D5.2, titled "The Power of Discourse". It is prepared as part of WP5 on "Smart Discourse", which has overall been working with Modules 1-3 of the CANDID project[1] (http://candid.no) in reviewing textual materials to look at issues we have identified as topics to address with peers in the Social Sciences, Information and Communication Technologies, Engineering, with legal scholars and practitioners. The modules consist of: Module 1 – User and Design Configurations, Module 2 – Risks, Rights and Engineering, and Module 3 – Sensing Infrastructures. For these modules, selected cases within smart health care, smart systems for energy management, pollution control, infrastructural and disaster management have been considered in the analysis of discourses on smart. In this report, however, we take the opportunity to focus specifically on EU policy discourse and discourse-analytic method in preparing this document as a draft paper for journal submission.

This paper analyses discourses of *smart*, a watchword used to mark recent shifts in technological development. The future will become one of smart homes, smart cities, smart healthcare, smart energy grids and metering and, more generally, the fusion of everyday practices and the so-called Internet of Things (IoT). We focus on who is included and excluded in the discourse as well as the ways in which the beneficiaries of so-called smart developments are constructed. In particular, we focus on constructions of agency – both human and non-human – and on the implications these constructions have for managing identities, formulating ingroups and outgroups and negotiating group boundaries. An emphasis on agency however, does not exhaust our analytic interest in discourses of smart. Strategic research and innovation agendas are formulated by governmental and supra-national agencies who decide the innovation policies in consultation with industries and academe and, consequently also, the investment priorities using public funds. The uptake of discourse on smart in European innovation policy is a case in point, considering for example the Digital Agenda for Europe (European Commission 2010b), and the pivotal role advanced Information and Communication Technologies (ICT) have in depicting a future Europe equipped to address the societal challenges of the day (European Commission 2011a). Policy and policy-related documents function as normative and regulatory resources in this respect, in organising what this future should look like, and by funding research on the ground the Commission meets a set of criteria that have been identified to bring the future to life. We are not implying that innovation policies are straightforwardly and seamlessly applied. The actors implicated in visions of the future may knowingly resist the roles reserved for them (see Xenitidou & Elsenbroich, *in prepration*), or not quite 'fit' in, as we will discuss below, or have their own interests and agendas (see Pickering, 1992). Hence, our focus is guided by our interest in the power relations that come into play, i.e., in voices that arise from positions of power to frame the ways in which this emerging new everyday world is constructed and constituted, as it appears, *on behalf of* the citizenry. We can say, our main aim, and concern at the same time, is to interrogate normative voices in policy and policy-related discourse of smart, but also the normative rhetorical resources therein. While we have identified voices reactive to normativity *in the content of discourse* (see

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Xenitidou & Gunnarsdóttir, 2017), we observe that normative ways of talking *about* smart, about future innovation and those positioned as beneficiaries, risk debilitating meaningful and potentially useful deconstruction. To shed light on the matter, we employ a discourse analytic approach.

2. Thematic background

This paper draws on the Horizon2020 project titled CANDID, focusing on smart technologies and systems in specific areas of development: smart infrastructures (e.g., the smart city), users and designs (e.g. smart homes, smart care and energy use), and the engineering of data, privacy and rights protections. The naming of technological solutions as 'smart' and what that can stand for, stretches much further afield. Similar notions have been a 'hot' topic in electronics engineering and materials science going back to the 1990s. They incorporate various ways of talking about how to take innovation into the 21st century, e.g., *ubiquitous computing* (Weiser, 1991) and *ambient intelligence* (AmI) (Aarts and Marzano, 2003). This *innovation talk* has taken on an assortment of guises, however, sharing a vision of pervasive, integrated and context-aware networks of computing and communications systems with sensors and actuators for smarter or more intelligent (and more efficient) ways of *doing things* in production and all areas of life.

Arguably, it is within the purview of innovators and industries to design and engineer in this area, to develop viable business models and deliver marketable solutions. At the heart is a principle of supply and demand, and of rational calculating consumers. As the argument goes, if technological solutions find markets, they must be what people want. If industries are profitable, the business models must be sound. However, innovation practice is not quite that straightforward. While the US government strategically funds military research and innovation, thus, by proxy the associated industries, the European Commission operates innovation policies and strategic agendas to subsidise European industries and their collaborations with academe. And, the advisory bodies in setting the priorities for innovation investment in Europe consist of industry spokespersons and academic research leaders, e.g., the Connect Advisory Forum (CAF), engaging also spokespersons from civil society organisations (CSO).

It is for this reason that we choose to focus on European policy discourse, rather than industry public relations and other media emerging in the marketplace to promote smart new products and systems. The fact that a supra-national agency is profoundly instrumental in depicting and promoting societal futures in and through discourse of smart, bears upon the relationship between governance and publics, state and citizens. Visions of integrated and context-aware systems have been a topic in European policy circles since the formation of the Advisory Group (AG) to the Information Society Technologies (IST) agenda in preparation for the 6th Framework Programme (ISTAG, 1999, 2000, 2001). Over time it became evident that the Social Science and Humanities (SSH) disciplines should be brought to the table for better understanding of societal acceptance and challenges, and innovation policy has been shifting towards so-called integrated and interdisciplinary solutions to societal problems, however, positioning advanced ICTs in a pivotal role (European Commission, 2010a, 2010b, 2011a). More recently, a programme of Responsible Research and Innovation (RRI) has taken shape

with the aim to improve upon the culture of accountability in scientific and technological development (European Commission, 2012a), and the RRI agenda and SSH disciplines are now embedded in ICT-related parts of the Horizon2020 work programme (European Commission, 2015).

One question to ask then is what exactly these agendas and programmes aim for in terms of societal development, who truly benefits and how? Are there any counter discourses to consider, of articulating and arguing *some other* innovative and societally beneficial ways of *doing things* for a better society? A related issue to take into account, turns on the question of promise. Publicly subsidised research and innovation is increasingly under pressure to demonstrate societal benefits and translate into practice. Hence, *promise* is key in articulating what smart stands for, although, the term is typically vague or, say, definitionally loose (cf. Lowy, on the "possibilities" that loose terms enable as boundary objects). Smart homes for assisted living *will* sort out the strain on our health systems, benefit the growing elderly population and those with chronic conditions (European Commission, 2012b). Smart cities *will* sort out infrastructural and environmental problems (European Commission, 2012c). The Digital Agenda for Europe *will* deliver growth and competitiveness. More generally, smart will bring about *the new everyday*, as proponents of the AmI agenda put it, a world in which people can relax and enjoy their everyday lives by relying on context-aware sensor and actuator systems to assist them, prompt them (or relevant others), entertain them and act on their behalf.

At a closer look however, it appears that smart technologies and systems so far in production, are fragmented and problem-solution specific, while the grander vision of fully integrated environments has not come to pass. The economic benefits remain uncertain of rolling out smart/mobile health solutions or other services paid for by public funds and built on technological development in this area (e.g., European Commission 2011b). Rather, individual solutions typically rely on *first markets* or, as in a case of smart meters in the UK where the cost of installing the meters is indirectly passed onto consumers. So-called smart devices and apps, designed to support home remote control, shopping, entertainment, travel, fitness and leisure are all examples of developments in markets aimed at consumption and disposable incomes, whereby the 'greater good' may quickly fade from view. Already in the early days of AmI research, the critique arose that "[g]eared as it seems to be to the affluent, much of Ambient Intelligence looks like superfluous 'gadgets for the rich'" (van Lente and Homburg, 2003, p. 31).

At the heart of the question we are asking then is what meanings are attached to developments that can radically refigure the everyday of (some) individuals by fuelling their desires and lifestyle needs, however, failing to deliver on practical social benefit to all, e.g., revolutionising the health service to deliver more equitably. Or, to draw on Aldus Huxley (1931), is it *smart new world*? Setting aside the implications of a smart new world, the discursive materials we have chosen for analysis here function as tangible, normative and regulatory resources in shaping an ideological and political agenda for the Innovation Union and its citizens, i.e., constructions of smart that we shall problematise as well as constructions of beneficiaries as various formulations of individuals, groups and society at large.

2. Method

In this section we discuss our method, acknowledging that it is not disconnected from the arguments we raise, as both have built in our own assumptions (see Tseelon, 1991). The section is split into three subsections, articulating what our assumptions are and the data we are considering in order to address our aim and analytic take. This may imply a narrative coming full circle – a rhetorical strategy we ourselves scrutinise in our data. Our task has been to enable dialogue across epistemic networks, which has included communication with peers (see deliverables D2.2, D3.2 and D5.3), engaging with EC policy texts and interview discourse on the 'digital world', 'smart' developments and 'responsible research and innovation'. We claim that our data and the way we handle them enable the arguments we formulate and, importantly they are open to other/further investigation with the authors and others associated with the discursive materials at hand.

2.1 Our analytic take

A key issue to address is what we mean by 'normative' here in reference to EC policy and policy-related discourse. One way to respond to this is by appealing to intertextuality. Intertextuality is indicated in the ways in which texts interact (what resources what) as well as for whom and by whom. In that sense, while it may be said that normativity is different for different socialities, or that there are many normativities, what matters for us in this study is agentive political power capable of enacting certain agendas over others. This is important in so far as those who are not invited to contribute substantively to such agendas are presented with versions or imaginaries of a future world, found in policy, political, elite and practitioner discourse, while navigating and negotiating their own versions.

The rationale for focusing on discourses, related to the European Commission in particular, centres on their role, not only as key in framing the approach to smart developments, including the ways in which notions of smart are constituted, but also and, by implication, in affording access to different actors and in managing agentive power. This approach is grounded in the view that discourse is performative (Austin, 1962), constituting and constitutive of real-life consequences (see *inter alia*, Callon 2007), which reflects our own framing of EC policy documents and policy-related discourse as normative, although, we have treated these documents as only one part of the assemblages that make up discourses of smart (Latour, 2005).

2.2 Our data

We consider four types of data: (i) EC policy documents (N=8), including 2016-2017 work programmes and communications documents (SWAFS[2] and European Research Infrastructures), documents related to RRI (N=3), and minutes, recommendations and position papers (most notably those of CAF[3], N=13), (ii) interviews with EC policy officers, members of advisory forums and practitioners (N=5) and CANDID

[2] SWAFS stands for Science With And For Society
[3] CAF stands for (DC-) CONNECT Advisory Forum

communications with peers (N=110); (iii) talks in conferences (N=1) as well as (iv) web texts from the official EC webpages.

We have taken into account the context-dependencies of document availability, how they are interacted with and how they function as tangible, normative and regulatory resources (see European Commission, 2008) on 'the digital world' and 'innovation', for example, in reference to the Digital Single Market (DSM) and Innovation Union web pages.

While documents and other media seem to have critical agency, other critical actors in these assemblages are the policy-makers and the practitioners interacting with them in constructions of what smart stands for. We opted for interviews with EC officials and advisors as well as user group representatives interacting with the Commission on issues such as RRI, also drawing on extracts from policy documents to prompt our discussions with our correspondents.

2.3 Analytic method

In this paper we focus on topics such as identity, categorisation, constructing selves and others, and *by implication*, inclusion and exclusion, and doing so in institutional settings (Drew and Heritage, 1992). As all of these topics traditionally concern social psychology, we opted for a discursive approach in social psychology to interrogate the ways in which these are constructed in discourse, EC policy texts and EC policy-related texts in particular.

The analysis is positioned within the discursive turn in social psychology, including discursive psychology (DP) (Edwards and Potter, 1992), rhetorical psychology (RP) (Billig, 1991) and critical discursive social psychology (CDSP) (Wetherell, 1998). It enables us to focus on regularities in discourse and in the lines of argumentation that are mobilised in terms of content, common place (Billig, 1991) and dilemmas (Billig et al., 1988) around which the arguments develop as well as the discursive strategies used to formulate them (Edwards and Potter, 1992). We pay attention to the ways in which participants orient to issues and position themselves, considering both local and macro-social implications. There are also significant insights to gain by considering speakers' identities and paying attention to the footing (Goffman, 1981) from which certain arguments are formulated, the stakes and the accountability management that goes on (Edwards and Potter, 1992).

The original project of DP was the critical reflection on the theory and method of cognitive psychology (Potter and Wetherell, 1987). The focus has been the ways in which social psychology may have psychologised its subject, attributing psychological categories to explain behaviour and developing theory on those bases. Counter to that in DP, identity, categorisation, inclusion and exclusion are examined for being made relevant in talk rather than as internal mental states studied by triggering external behavioural evidence. Work in this area has, invariably, focused on the ways in which rationality was treated as a norm in social psychological theory, for example leading to a treatment of prejudice as a failing of human rational thinking, i.e., pathologising the prejudiced "other" (see Wetherell and Potter, 1992).

2.3.1 Advances in social psychology and discourse

Advances in social psychology and discourse concern both the substantive topics addressed by this field as well as advances in the paradigm itself. As regards the former, social psychologists who employ discursive and rhetorical approaches have interrogated assumptions and constructions in traditional social psychological research. For example, Gibson (2013) focuses on the Milgram obedience experiments, analysing the recordings of the verbal interactions between the experimenter and the participants as well as questioning the ways in which obedience was constructed in the first place.

As regards to extending the paradigm, the term Critical Discursive Social Psychology (CDSP) was coined by Wetherell (1998) as a synthesised approach, combining the focus of Discursive Psychology to the analysis of discourse with post-structuralist theories that examine how representations of social phenomena come into being, circulate in certain socio-historical contexts, and have consequences (Bozatzis, 2009; Edley, 2001; Wetherell, 1998). Emphasis on accountability is quite relevant in this respect: "the way in which people display sensitivity to what might be inferred about their psychological state from what they say" (McKinlay & McVittie, 2008, p. 13). Sensitivities in discourse to inference and interpretation, are seen as informing the way in which people talk, e.g., wishing to appear rational, and presenting what they say as true and factual, not subjective or simply a matter of opinion.

CDSP pays attention to the rhetorical strategies participants use to manage their accountability when they engage in verbal interaction (Edwards, 1997; Edwards & Potter, 1992; Potter, 1996). It also scrutinises discourses mobilised for the socio-historical debates they can carry over time, and the intergroup relations represented in historical developments of these discourses that can then serve to maintain or undermine existing social inequalities and power relations. This approach has some overlaps with the emphasis in rhetorical psychology (Billig, 1991), on talk as inherently argumentative and employing rhetorical skill in the sense that it is organised rhetorically with the aim to persuade.

We believe that the critique relevant to discursive approaches in general and DP in particular is somewhat addressed by CDSP. Yet, we also engage with this critique to the extent it is of relevance to this paper. First, the critique concerns the status of reality – "What about reality?" "What is outside discourse?" (Jorgensen and Philips, 2002, p. 177): There are two ways to respond to this from a discourse analytic point of view: first, people's concerns are made relevant discursively, such as in the case of epistemic wars (also fought discursively), but this does not exclude subject positions and lived experiences ("the discourses we live by"). In addition, meaning ascriptions and changes in them are collective social processes *but also, importantly,* they are entangled in power relations and ideological regimes. Therefore, discourse as truth regime is constitutive of, resisted through, etc. Jorgensen and Philips (2002) argue to that end "[t]hat the social is constituted does not make it any less real" (p. 178), nor does it imply equal access or representation of agency in it, *we would argue*.

Hayter & Hegarty (2015) extend the critique by asking: are only DA researchers able to 'see'? Applying a genealogical analysis to Potter & Wetherell's "Discourse and Social Psychology" (1987), they draw on Foucault's aim to engender distrust in narratives of progress and evolution that purport to explain the present. They argue that though seminal and pioneering, Potter & Wetherell's "Discourse and Social Psychology" (1987) may not be as revolutionary and deconstructive as it claims to be on the grounds that it draws on theory and uses theoretical tools and concepts historically embedded within late capitalism, such as their uptake of reflexivity as a research strategy. Potter and Wetherell did not attribute this strategy to discourse analysts only, as reflexivity is associated with a concern with accountability (see also Wetherell and Potter, 2015) in the way people speak. Nevertheless, they did not deconstruct the notion of reflexivity itself for its socio-historical and ideological roots. It is fair, therefore, following Foucault (1966/2009) to argue that reflexivity itself is a condition of knowledge rather than grounded by ontology (see Smith, 2005). For the purposes of this paper and of claiming to 'see' better or clearer through applying a discourse analytic approach, we argue, that the notion of reflexivity as we know it today, echoes an emphasis on rationality in so far as it is in the service of questioning assumptions and face-value from the angle of the 'better informed'. This notion of reflexivity can be traced back to Enlightenment thinking rather than it being endemic of the thinking process (cf. Billig, 1991). In that sense, while it is not grounded by ontology, the ways of going about being reflexive are shared understandings across socio-historical contexts (and time periods).

Key points to consider for the case at hand, are the following:

First, discourse analysts in general and DP in particular are involved in a dual project – that of deconstructing discourse for the assumptions or, to quote Jorgensen and Philips (2002) 'fixations', they bear, in order to "destabilise prevailing systems of meaning" (p. 178). This entails a few assumptions in and of itself, e.g., that systems of meaning are always in need of deconstruction, and that they bear forms of inequality in constituting social relations as critical discourse analyses have shown (see for example Fairclough, 2003; van Dijk, 1997; Wodak & Myers, 2001). Therefore, the assumption is that dominant theories and ideologies are problematic one way or the other, for example, in treating individuals as unitary entities; and group divisions and conflict as representative of natural unquestioned hierarchies, as we shall see.

Secondly, discourse analysts in general and DP in particular take a critical approach to discourse while at the same time acknowledging the co-construction at work in such analyses that are constitutive 'accounts of accounts', 'versions of versions' (Potter and Wetherell, 1987, p. 4).

Thirdly, while also not blind to Hayter's & Hegarty's, critiques above, it is important to consider the platform discourse analysis in general and DP in particular has built for the study of ideology and the implications for critique. As argued by Wetherell and Potter (2015), "discourse analysts examining the power of talk and texts should focus on ideological practice, not on the propositional content of arguments and theories alone". That is, "what is often most crucial socially and politically is not so much the content of ideas or arguments in themselves […] but how those ideas are used in practice and to

what effects" (p. 392).

As regards our own positioning, we foreground material practice in the way we treat discourses of smart. For example, we do not claim that inclusion and exclusion only manifest discursively, but are real-life consequences born of the relevancy-constraints and context-dependencies of practice to which the discourse refers. However, we cannot claim a linear or direct leap from discourses of smart to innovation or everyday settings. What we *can* claim is a relationship between discourses and worlds of material practice, the discourses constituting and constitutive of those selfsame practices. For example, constructing citizens in terms of nationals of EU member-states is consequential of not attending to access issues that non-citizens or non-EU member state citizens might face *notwithstanding how citizenship is and can be enacted in the first place*. Recognition of 'others' under the headings of minorities, vulnerable groups, etc., typically means placing emphasis on extended provisions and (political) participation opportunities, for example, to Roma people or people with disabilities, to compensate for inequalities. We argue that this reifies hierarchical categorisations, not only of beneficiaries, but also of epistemic regimes and networks, of knowledge gate-keepers, and so on.

2.3.2 Institutional discourse (practitioner, political/elite, policy rhetoric as genres)

This paper focuses on a specific genre of discourse, that of European Commission officials, members of advisory boards to the European Commission, texts produced as part of EC communications, including practitioners interacting with policy development, webpages, CANDID peer communications and other promotional materials. We treat all this as institutional discourse in the sense of (i) taking place in institutional contexts with the interplay of various modes of communication (see Drew & Sorjonen, 2011); and (ii) organisations being discursive constructions (see Mumby and Mease, 2011), although, it is impossible to separate members' everyday discursive practices from the organisation itself as material practice.

In this paper, this relates to the ways in which we acknowledge the context-dependencies in terms of function and action-orientation – i.e. the purpose of certain texts – positioning – speaking from certain positions – and intertextuality, i.e. what is expected to be said, what resources are expected to be used in reference to enacted agendas and common practice. We bring these matters to analytic scrutiny in terms of content – *what is being said* – of (power) structures – *who says it* (author), and of relations – *to whom* (addressees). Here, it is unattainable to produce definitive accounts of expert and lay discourses alike, but to observe how authority comes into play (or not) in descriptive and rhetorical accounts, is attainable by examining how discourses are commonly (and variably) organised, socially constructed and legitimised (see Boltanski and Thevenot, 2006). Similarly, we take variability and flexibility into account in considering context-dependence when speakers resort to the disclaimer of speaking from a personal rather than professional opinion. We noted this strategy in previous work (see Xenitidou & Gunnarsdóttir, 2017), in looking at talk about smart technologies and issues in reference to the safeguarding of people's rights. This strategy enabled an account based on aspiration to innovate, however, disclaiming any commitment to knowledge or certainty,

and inoculating the speaker from having to provide answers or solutions as would have been expected from an expert. Similarly, while elite, policy and political discourse is expected to make use of certain rhetorical strategies and bear certain stakes, it is a matter of analytic scrutiny whether or not it does. For example, it is common in political discourse to bear the stake of persuasion. This is a double stake, as it is concerned with maintaining the convinced *and* recruiting more followers, based on a model developed by Reicher & Hopkins (2001) for studying political leadership and political mobilisation discourse. According to this model, politicians can construct a single overarching identity, e.g. EU citizens, which is not divided by political partisanship. The second step would then be to construct their political project as encapsulating important values and norms of that category. Finally, they present themselves as prototypical members of that social category.

We note these stakes but also the dilemmas related to certified knowledge, such as the one between expertise and equality (Billig et al, 1988). According to Billig et al (1988), it is socially normative both to criticise and endorse the notions of authority and expertise, a tension that reflects an ideological dilemma between authoritarian and equalitarian principles, and a conflict which is evident in social institutions. The texts we are examining might speak to this conflict, or try to acknowledge it, for example by claiming to know better, while managing potential inequalities to which that claim may lend itself.

Finally, having laid out our analytic take, we will pay particular attention to many of the discursive elements we observe, as banal, yet key strategies through which normativity is achieved. Overall, the crucial question we seek to explore is whether we can use discourse analytic approach as a deconstructionist way of 'seeing' the worlds in-the-making, in order to initiate further dialogue with the authors (spokespersons) and others who interact with the texts under scrutiny in this study. We use the term 'author' here in a colloquial sense, rather than following Goffman's thesis (1981) on footing according to which 'author' refers to the person who selected particular words and phrasing. Nevertheless, we pay analytic attention to the footing on which arguments are formulated in the texts we discuss, insofar as it relates to accountability and categorisation work.

3. Analysis

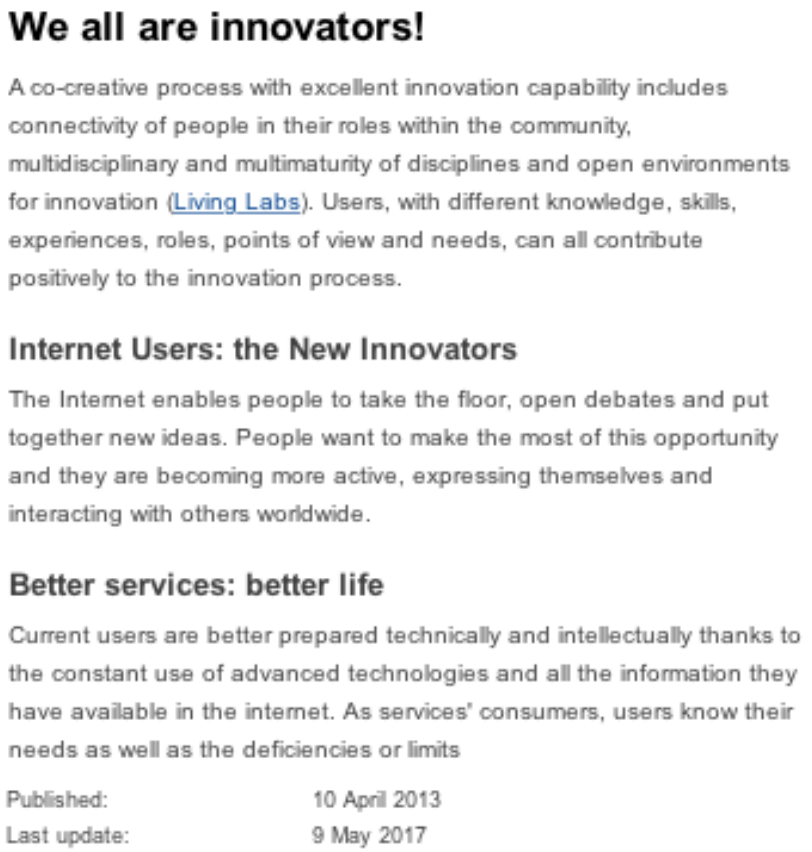
The discourses of smart treat human and non-human actors in particular ways and with certain implications. While not unitary as a discourse genre, the categorisation process that goes on will variably include and exclude groups of people. This may manifest itself explicitly in talking about inclusion or exclusion 'in theory'. It may be an orientation 'in practice' (see Potter and Litton, 1985 on the distinction between 'in theory' and 'in practice'), or a consequence of specific constructions in the discourse. We focus on the ways in which this is manifested in discourses of smart found in EC policy texts, and in the ways in which EC policy officers, advisors to the EC and practitioners talk about smart developments.

This section is divided into two parts: 3.1 focuses on who is made relevant and how their roles are constructed, 3.2 focuses on the ways in which Europe and its citizens are constructed.

3.1 Engagement – what roles are afforded to different actors?

The first extract represents a common way of addressing publics in relation to the use of the internet. It comes from the DSM Open and Participative Innovation webpage (see figure below), available at https://ec.europa.eu/digital-single-market/en/open-and-participative-innovation.

Extract 1



We all are innovators!

A co-creative process with excellent innovation capability includes connectivity of people in their roles within the community, multidisciplinary and multimaturity of disciplines and open environments for innovation (Living Labs). Users, with different knowledge, skills, experiences, roles, points of view and needs, can all contribute positively to the innovation process.

Internet Users: the New Innovators

The Internet enables people to take the floor, open debates and put together new ideas. People want to make the most of this opportunity and they are becoming more active, expressing themselves and interacting with others worldwide.

Better services: better life

Current users are better prepared technically and intellectually thanks to the constant use of advanced technologies and all the information they have available in the internet. As services' consumers, users know their needs as well as the deficiencies or limits

Published: 10 April 2013
Last update: 9 May 2017

The main heading here and the message conveyed is: "We are all innovators!". It appears in bold and in larger font in comparison to the sub-headings that follow and it ends with an exclamation mark. The subheadings, titles of the second and third paragraphs of the text in the image, "We are all innovators!", also appear in bold, some first letters are capitalised and colons are used. All of these features are typical of the online genre of featuring text. It aims to attract attention and convey short and concise messages.

In the main heading, the message is articulated using an extreme case formulation, (Pomerantz, 1986) addressing a super-ordinate category, rhetorically constructed using of the first person plural and the adverb all. Everyone is categorically constructed as

"innovator". The text that follows indicates that some explanation of this is needed but only a general one, making sure that all boxes are ticked: People may have different roles in a community, needs, skills knowledge, etc. notwithstanding this acknowledgment, the role of innovation and of active interaction with it is taken for granted, assuming that everyone can, has access to, is afforded or interested.

In the titles of the second and third paragraphs, people *in general* are addressed as "Internet Users" with a secondary explanation of that category as "the New Innovators". This first subheading foregrounds an account that takes internet use for granted, creating an anticipation about the following text as to what the heading signifies of relevance: a link between internet users and innovation. The text that follows then starts with a shift in footing, whereby the Internet becomes the acting subject. Using categorical modality (Fairclough, 2003) to construct internet features as common place, the Internet is an enabler, endowing people with active agency (cf. Lynch, 2016). Footing then shifts to (speak on behalf of) people, who are categorically constructed as responsive to these functions, presented in a three-part list, again as common place, being "active, expressing themselves and interacting with others worldwide." These mundane and common place opportunities are awaiting *out-there* as unquestionable truths about the role of the internet and people's wants and expectations.

The following subheading then signals that "[b]etter services" mean "better life". The subject shifts to "current users" who are categorically constructed as "better prepared", the gratitude for this attributed to the "use of advanced technologies" and the "information" "available in the internet". The text does a few things here through presence and absence. First, people are positioned as users, which seems to be a taken for granted category as the absence of further qualification indicates. Secondly, they are constructed as better prepared and equipped, begging the questions 'compared to whom/what?' and 'for what?'. These are the banal functions of technology and the internet. Using extreme case formulations (Pomerantz, 1986) users are portrayed as "constant[ly]" engaging and having "all the information" "available" to them - strategies that function to make a point come across stronger – to "legitimise claims" according to Pomerantz (1986). In so doing, "advanced technologies" is a collocation, treating and constituting recourse to technologies as banal, and so is information availability in the internet. Most importantly this formulation is based on assumptions of users as savvy, able to access, understand and use advanced information technologies, and able to access, use and navigate the internet. The next sentence explicitly argues this, constructing users in market terms as "services' consumers", as rational and calculative actors, with complete control of themselves, knowing "their needs as well as the deficiencies or limits". In so doing, not only are affordability, capability and accessibility taken for granted. The function of the internet is too. It improves lives but, also, responsibility is managed by loading it onto the individual (people users).

While these sections of text are very rich in terms of constructions and assumptions, the implications we wish to stress as part of this section are: (i) the vision of savvy, rational, calculative people being treated as normal, (ii) non-savvy, rational, calculative people are excluded from this vision (and from normality), (iii) and even for those constructed as

normal, active agency is confined to their responsiveness to these advanced information and communications technologies.

The next extract comes from a talk in the context of a final conference of an FP7 project on evaluating the impact of the Social Sciences and Humanities on innovation. The speaker is an EC official and her account unfolds in talking about the "impacts of research for society". What the term 'society' designates and what the commonly termed 'societal challenges' comprise of (see the H2020 Work Programme), seem to be in no need of further articulation in this address.

Extract 2

At the early fist of setting up of the European policy on Science and Technology we can see that activities were more technically driven because it was absolutely necessary to create the bases of knowledge and know-how; and then progressively, because the use of these results and the benefit of the society, >because all of these targeted objectives were societal challenges they should make benefit for society< in all the ways from policy preparation, from immediate use, from long-term perspectives, and from generating new knowledge on the basis of what has been produced, they should be understood by citizens and policy makers and their use should be planned from the beginning. (Member of EC advisory board)

The EC officer starts with the first person plural in a formulation of an admission to an unstated – but possibly popular argument outside the discussion – that S & T activities were "more technically driven" at the outset of policy on investment and direction. While this seems like an admission, the speaker appears to be compelled to offer a justification to follow. The justification constructs technologically driven innovation as *the way* in which the bases of knowledge and know-how are created. "Citizens and policy makers" only follow which is constructed as the progression forward but also as a requirement. This understanding of progression from 'purely' technical achievements, constructs citizens and policy-makers in an axiological hierarchy, with technical achievement as impersonal, dissociated from people and society and more advanced too—able to create true and objective knowledge which is not immediately intelligible to citizens and policy-makers. (The speaker explicitly states this later on in the address). S/he then makes an explicit and detailed effort to associate this rationale with "the benefit for the society", and legitimise it. The strategy here is a circular reasoning: "because all of these targeted objectives were societal challenges they should make benefit for society" followed by a listing of four ways in which this approach to innovation "should" achieve the societal benefit downstream: by including policy, future perspectives, new knowledge, and projected use. None of this is explicated further however, which could be an appeal to corroboration based on intertextual understanding, i.e., the context of this conference. In addition, this line of argumentation was not picked up by the audience, albeit, the event did not offer space for such interactions – so at a face-value at least, this intertextual understanding is normative.

All in all, the extract is discussed in this section for the following reasons: (i) as in the previous extract, engaging with technological advancements is the 'normal'; (ii) the benefit of innovation for society is taken for granted; (iii) an axiology is assumed which places scientific and technological work centre-stage in sedimenting knowledge and know-how; and (iv) none of the grand categories mentioned as beneficiaries are explicated further (society, citizens, certain groups or policy makers?).

In the next extract, a somewhat different orientation to participation on the part of potential 'beneficiaries' is manifested. The extract comes from a discussion with a user group representative and develops in discussing the notion of hyperconnectivity drawn from EC policy documentation (see for example European Commission, 2015). The speaker was prompted to consider the reference to hyperconnectivity – "in the era of hyperconnectivity", "we are all hyper connected" – made in these documents.

Extract 3

as long as, erm, as long as people have the right to, not to be connected or, erm, to decide whether to be connected or not and whether everybody has the possibility to be connected because, I mean, this is not only an issue about connectivity, it's also an issue about affordability of that connection and the accessibility of that connection so, erm, for us, erm, internet of things won't make a change or improvement in our life if this is not acceptable or if the technology is too expensive to buy so, erm, the, erm, there are also, it's not only the connectivity aspect that we care about it's also the affordability, it's also the accessibility of it. (User group rep)

The speaker responds with a conditional account in response to the issue of hyperconnectivity, made up of a three-part list constructing connectivity in terms of a right and possibility. The first two parts – "the right not to be connected", "the right to decide whether to be connected or not" – foreground an emphasis on exclusion and inclusion by choice as a right. The emphasis is attributed by use of repetition, rewording people's right to decide their own fate. In the first instance, the response treats people as rights' holders and entails the assumption that people are aware of their rights and can act upon that awareness. The third part of the list then shifts the orientation to hyperconnectivity from a matter of individual right to a matter of indiscriminate possibility – "everybody" having "the possibility to be connected". S/he then goes on to explain this affirmatively, by the use of "I mean".

The explanatory account consists of affordability and accessibility as key concerns for the speaker and the group s/he represents – "for *us*", "what *we care* about". Thus, apart from shifting the orientation from a right to an indiscriminate possibility, the shift is also from individual, to relevant groups, to people in general. For example, the speaker orients to affordability and accessibility as a user group representative, yet aligning with people at large – "our life". These shifts in footing indicate the ways in which voices are entangled in this kind of rhetoric and of the stakes made relevant in this talk – coming across as someone who is a group representative and group oriented (van Knippenberg and Hogg, 2003). From this mixed footing, the speaker argues that IoT "won't make a change or

improvement" unless it is "acceptable" and affordable. S/he has deconstructed hyperconnectivity and questioned its built-in assumptions, while IoT is simply a matter of recent changes in the world and improvement potential.

The extract is included in this section as an example of the grounds on which EC institutional discourse is taken up by actors who interact with it, yet, are positioned outside the immediate institutional EC settings. The speaker addresses this discourse at its core, by topicalising the right to dissidence, "right not to be connected", which then quickly gives way to resource-related arguments. IoT is constructed as (i) having a change potential, (ii) this change potential is implied to be positive; and (iii) people seem to be the (mere) recipients of this.

The next extract comes from an interview with a peer from a user movement participating in the study on *Risks, Rights and Engineering.* The extract unfolds after the interviewer has made a distinction between safeguarding rights and (other) "concrete problems" related to these "processes", such as "financial". The extract engages with the question 'in theory' and then moves on to produce what appears to be an 'in practice' account (see Potter and Litton, 1985).

Extract 4

Right now personally, my thinking is, as in my private opinion, not my professional one, in that sense that I am meant to be going out there and announcing it is that I'm waiting for some kind of different level of technology. Something else, I don't know. Blog was all those years ago. Something that enhances the power of the individual to be able to do things. I don't know what it is. It could be someone building useful and good algorithms for individuals, I don't know. Then that punctuality may bring about a different swing in the spiral, the upward spiral hopefully. I don't know what that could be. Maybe something to do with maybe something to do with sensors, maybe some sort of strange data analysis that is not complicated and somehow moves us to the different level that allows individuals who are not trained data scientists to understand data. Maybe some kind of visualisation, maybe some way of representing data that somehow brings it closer to everyone. I don't know, but that's what I'm hoping.

The extract starts with a disclaimer on the part of the peer that they are speaking from a personal rather than professional opinion (see Gilbert and Mulkay, 1984, on contingency discourse). This then enables an account based on aspiration, disclaiming any commitment to knowledge or certainty – "waiting for", "I don't know", "Maybe", "hoping" – and it inoculates the speaker from having to provide answers or solutions. In this account, the peer calls for a technological revolution in the service of individuals. In so doing, the human agent in this call for technological revolution is vague – "someone"; individuals are constructed here again as recipients, assuming that their ability "to do things" will be "enhance[d]". While allowances are made for including "individuals who are not trained data scientists", and for the possibility that this "may" and, by consequence, may not "bring about" "the upward swing" "in the spiral", the account still

reproduces (i) passive agency for individuals, and (ii) their desire for technological advancements as the key to better futures.

3.2 For whom is all this 'meant'? Constructing Europe and (European) citizens

This section focuses on the ways in which Europe and its citizens are constructed in EC policy texts and the discourse of actors engaging with it, including politicians, advisors, practitioners and CANDID peers.

Extract 5 comes from the introduction of an EC communication (COM) document titled: "A Digital Agenda for Europe", published in 2010. The extract appears on page 3 of the document and makes up the first paragraph of the introduction. The extract is presented in this section to frame the scene with regards to the digital agenda for Europe.

Extract 5

INTRODUCTION
The overall aim of the Digital Agenda is to deliver sustainable economic and social benefits from a digital single market based on fast and ultra fast internet and interoperable applications.
The crisis has wiped out years of economic and social progress and exposed structural weaknesses in Europe's economy. Europe's primary goal today must be to get Europe back on track. To achieve a sustainable future, it must already look beyond the short term. Faced with demographic ageing and global competition we have three options: work harder, work longer or work smarter. We will probably have to do all three, but the third option is the only way to guarantee increasing standards of life for Europeans. To achieve this, the Digital Agenda makes proposals for actions that need to be taken urgently to get Europe on track for smart, sustainable and inclusive growth. Its proposals will set the scene for the longer-term transformations that the increasingly digital economy and society will bring about.

The extract is the first paragraph one encounters in reading this publicly available document. It starts by setting the scene, constructing "the Digital Agenda" as an actor with agency and "aim". The aim suggests that "a digital single market" will produce "sustainable economic and social benefits". As this is amenable to the question, "why" "is that required"?, The follow up sentence indicates some awareness that the previous claim requires legitimation. This is evident in how the next few sentences function as parentheses, providing background information in support of the need for sustainable economic and social benefits such as the digital agenda aims to deliver. This background consists of categorical constructions of Europe in "crisis" and of setting Europe off and back on "track". In these formulations, Europe is also treated as an entity with agency and goals. The notion of Europe is casually employed as a common place category, its agentive power and properties in no need of further qualification.

The footing then shifts to "we", listing three tasks as a complete list of what has to be done, yet with the third item of list as the only alternative for an 'efficient' way of

achieving what these tasks are meant to achieve: "a sustainable future". The shift in footing may be relevant to the content of these tasks – "work harder, work longer or work smarter". Work requires human agency and the authors use the first person plural to align themselves in constructing the in-group. However, in the next sentence, our smarter way of working is categorically constructed as "the only way to guarantee increasing standards of living for Europeans". The formulation emphasises preoccupation with 'working smarter', using an extreme case formulation – "the only way" – and positions Europeans as the addressees / beneficiaries of taking that course. This problematises the membership of Europe, of "we" and of Europeans. Will some need to work harder for the rest? And, who are these Europeans?

Interestingly, 'working Europeans' are treated as unproblematic which becomes all the more evident as the footing shifts again in the next and final two sentences of the paragraph. It shifts back to the acting subject being "the Digital Agenda", introducing yet another beneficiary – "society". The argument comes full circle: (i) the Digital Agenda has an aim, sanctioned by providing a gloomy picture of Europe, (ii) constructing a move forward in specific ways as inevitable, and (iii) blurring human agency in depicting this process. In so doing, the policy that is articulated is only accountable to what are constructed as challenges to vague categories of place, people and work, for the benefit of which the Digital Agenda claims to act.

The final three extracts problematise further the construction of the beneficiaries of smart developments as articulated in EC policy documents. Extract 6 comes from a discussion with a user group representative. It evolves in response to a question where the interviewer puts forward the words "European" and "citizen" present in EC document excerpts that were used to prompt the discussion. The interviewer is hinting that the framing of these terms might be in need of further explanation.

Extract 6

we are all citizens, erm, the only problems is about what level of citizen, citizenship can we enjoy, I mean, erm, they may, they may not know, for instance, that there are still many people with disabilities in Europe that lack legal capacity for instance and, erm, those erm, are considered inside the citizenship that they are referring to. I mean, this is a plan ((problem?)) when, when referring to general terms and not, erm, embracing, erm, a broader sense of citizenship maybe for them citizenship is just the erm, regular, erm, western man in the, in his 30s erm, and that should it be the case, we are all citizens. So, I don't know what to, I mean, what they, they mean by this part, I mean, we're on a par with that citizen erm, term as long as that includes everybody. (User group rep)

The speaker starts with a global formulation and an extreme case formulation – "we are all citizens", hinting to a 'but'" which then follows. While this is structured as an 'in principle' argument in order to make a point about an 'in practice' argument, it treats citizenship as a given status. This could be taken to exclude by consequence people who do not have such a status. The 'in practice' argument that follows is then foregrounded as a "problem" – or "the only problem", signalling a specific critique. The speaker

problematizes the ways in which the notion of citizen is treated in EC documents, a problem consisting of what s/he terms "the level of citizenship" "we enjoy". S/he then uses (vague) examples of this, implying that some people may not be enjoying full citizenship rights. S/he mitigates the responsibility of those who use these constructions – the authors of EC policy documents / policy makers / technology developers (mentioned in other parts of the interview) – by introducing the examples as something that "they may not know". The speaker then goes back to orienting to particular connotations as a "problem", providing a hypothetical construction of what "they" assume to be a citizen which is articulated in a list of properties – "regular", "western man", "in his 30s". This hypothetical construction of a normal person drawing on gender and age stereotyping, enables the speaker to allude to a critique without explicitly voicing it. Having done so, the utterance closes similarly to the way it started, by arguing the point that the term itself is not the issue/problem; rather than orienting to the level of citizenship, as in the beginning, the closing response orients to the membership of the category, drawing on the extremes of it – including "everyone".

This extract is exemplary for problematising notions such as that of "citizens" in terms of the ways in which they are used in EC policy. Problematising levels of membership makes up (i) an argument for full citizenship rights for all. The speaker interacts with, criticises and qualifies a critique of the ways in which the term 'citizen' is used in EC documents; however, (ii) the use of the term *per se* and its *specific* affordances remain unchallenged, e.g., the relationship it implies with a civic entity, what that is and how one is 'entitled' to it. While this type of discourse is reactive rather than defensive – a common way to interact with and challenge normative discourse – it is still not deconstructive.

Hinting at the need to pause and further explain the terms, 'European' and 'citizen', is not necessarily picked up as an invitation to problematise or challenge them in any way (let alone articulating a reactive line about the terms of membership, and criticising stereotypical assumptions embedded in the ways in which they are employed in policy discourse). This is manifested in the final two extracts in this section which comes from a discussion with members of two different EC advisory groups member and evolves in response to the same question as the one prompted by extract 6. Extract 7 in particular develops in response to a mention of the DSM webpage (see extract 1), and whether or not it problematises the role of people. A mention of "provision of digital resources to citizens" prompts the interviewer to invite a definition of the term 'citizen'.

Extract 7

Is there any ambiguity about what a European citizen actually is? […] I have never given some thou some deeper thought about it

The immediate reaction of the advisor is formulated as a rhetorical question. This form in responding to the ways in which the citizen is painted in EC policy documents implies two things: (i) that the term citizen is given and in no further need of explication or thought; (ii) there is no "ambiguity about what a European citizen actually is". The

speaker orients to the term in reference to the notion of EU integration. European citizens as nationals of member states. Nevertheless, two disclaimers follow, one in the extract above – "I have never given some thou some deeper thought about it" and one towards the end of the discussion: the discussion continued with the advisory board member disclaiming that s/he is being interviewed as a member of a specific advisory board and that s/he has not heard anything specific on this board that questions the 'citizen'. The first disclaimer above treats as unaccountable not giving deeper thought to the term citizen, while the second one, later on in the discussion, manages the stakes on the part of the speaker. The capacity in which the speaker is interviewed, leaves it irrelevant to problematise the 'citizen' term and category memberships, thus, disclaiming any (moral) responsibility.

In the final extract, prompting the membership and meaning of citizenship seems to invite overarching categorisations and hierarchies with reference to skills and knowledge, including "people on the street", SSH and ICT.

Extract 8

Well, […], I'm, I'm talking about the, the, the citizen that is, er, is, er, is on the street and it it doesn't have it doesn't have any, any, any connection with, er, with, umm, with research. ((could)) That the the other one, that is very connected with, with research. But, but sometimes... but well it, er, is the c... the case with, er, er, humanities and etc, that don't have to use, er, these new technologies on their devices. On the other hand they ((humanities and etc)) have to use them to make, er, better research in a better way. So that's what we are talking about, social literate scientists and, er, social science literate technologies. Er, so, er, I am talking about all this range of citizens (.) because nowadays I don't think that we can afford to have a society that, er, er, er, doesn't understand what research is, is doing and what is research for and it would be, umm, a major, umm, a major achievement if, umm, if we can, er, change the, the, the current paradigm. (Member of an EC advisory group)

The speaker responds to the question by initially drawing a distinction between two types of citizens: the one "on the street" – a popular metaphor for the 'everyday', 'common' person and "the other one that is very connected with research". While the first type draws on a common notion in democratic rhetoric – talking on behalf of the 'demos' – it constructs the everyday person as disconnected from research. To this type, the antipode is "the one that is very connected with research". This seems to make relevant for the speaker an argument about the use of the technologies s/he had been talking about (digital technologies) by SSH researchers. In this argument "have to" is used in two different ways; one to argue that SSH researchers *don't need* to use the "new technologies"; "on the other hand" that SSH researchers *must* use them.

This structure first indicates that while SSH people are very connected with research compared to the man on the street, they are still not 'savvy' enough, as indicated by the use of "[b]ut". Secondly, it constructs the use of "these new technologies" by SSH researchers as a requirement for "better research" and "better ways" of conducting it. Not

only does s/he use a linear argument to align research method to research output. This way of talking is *also* embedded in assumptions that pertain to a hierarchy of epistemic communities. In so doing, further category work and a further distinction is implied, i.e., between SSH and a category of 'technologically savvy' researchers using the new technologies.

This is then explicitly articulated in the sentence that follows. "So" signals that the speaker is resuming the response to the interviewer, followed by a shift in footing from the first person singular – "I" – to plural – "we" – signalling that the notion of citizen s/he has been talking about is a group-shared notion (possibly alluding to the advisory group / policy group of which s/he is positioned to speak as a member). This change of hats serves an appeal to corroboration (Edwards and Potter, 1992), a distance and appeal to shared responsibility for the advocated argument, or an appeal to speaking as group representative, all common place strategies in managing accountability, especially when that is at 'stake'. Having done so, s/he concludes that "that's what we are talking about", as the goal category: "social literate scientists" and, "social science literate technologies".

After making these distinctions relevant in talking about the notion of citizen, s/he shifts footing again to claim authorship for grouping all of the above categories into "this range of citizens". The "range" implies inclusion, yet in the justification of this membership – the "range" – another term is made relevant – "society". Talking about a range of citizens is associated with society being able to "understand what research is, is doing and what is research for". In making this association, society is set apart at the receiving end of the research process.

In talking about the notion of citizen, "the man on the street" is presented as *inside* the citizen category, notwithstanding the assumption of a hierarchy in talking about the subcategories – lay person, SSH researcher and savvy researcher. In talking about progress, society is positioned *outside.* S/he implies that the current paradigm consists of a society that does not understand the content and purpose of research. In arguing so, the speaker positions him/herself in a category that "cannot afford" and seeks to "change" this "paradigm". The speaker stands apart from society, able to 'see' what the issue is with society and tasked with changing it, which is a common place way of talking in policy discourse. Society is constructed as a unitary entity and the task of 'educating' it is rendered inevitable in this line of argument. Importantly, the use of the word "afford" draws on economics and implies a parallel universe. "Society" is not only external to the universe that drives the future but also an impediment, holding that drive back as a result of not understanding.

This argumentation is reminding of two kinds of talk. One is premised on epistemic hierarchies, for example, that *service* disciplines only fill in or make up for knowledge gaps in *master* disciplines (Barry et al, 2008; also Xenitidou and Elsenbroich, *in preparation* on ways of managing dogmatism in scientists' talk), with consequences for power relations in knowledge production. The other one echoes the policy discourse that blurs agencies in talking about smart (see extract 4). As a rhetorical strategy, vagueness is a way of legitimating arguments, of constituting what is being argued as banal (see

Edwards and Potter, 1992); or it is indicative of the assumptions the vagueness is grounded on. In policy discourse, vagueness and definitional looseness are instruments in the service of policy agendas (e.g., loose definitions of smart or intelligence). Employing vagueness rhetorically may also be indicative of dilemmas, requiring vagueness to manage tension, such as that between equality and expertise (Billig et al, 1988).

4. Discussion

In this paper we have interrogated (normative) assumptions on which discourse of smart is based. We have focused on the ways in which discourse performs category construction and what its functions are – as such constructions may include or exclude certain groups – as well as the assumptions and resources used to construct people, society, citizens, and epistemes. Our key task has been guided by our overall aim in the CANDID[4] project summarised in the following: How can communications between all the actors implicated in smart innovation be clarified and improved upon?

We have treated this as a learning exercise. What we learn about inclusion / exclusion and beneficiaries, takes on a number of manifestations. People are linked to internet use as innovators in their own right – the internet being the enabler of information gathering, expression and interaction – and the responsibility is with people to assume these affordances. Conversely, we learn that citizens are often implicated in designs as western males in their 30s, resulting in technologies and systems that are far from inclusive. There are both tech savvy and non-tech savvy citizens, the latter of which *must* use the new technologies, and there is a society that needs educating because 'we' cannot afford to hold back technological advances. We observe a key assumption here that using advanced technologies and accessing information *will* bring about better lives for citizens who are constructed as rational, calculative, responsive and responsible. Technology is put centre stage and constructed as impersonal, in the service and to the benefit of society. The digital single market *will* produce sustainable benefits and take Europe out of a crisis, however, the argument is raised that being (dis)connected in a hyperconnected world should be a matter of right and possibility.

How are these constructed: Claims acquire legitimacy in the use of *extreme case formulations* about the potential for *constant* engagement and having *all* the information. Referring to 'crisis' and being 'on and off track', justifies certain societal requirements and individual qualities (work smarter) as the 'only way' forward, whereby such *desirable* qualities become normative. Alluding to a hierarchy of disciplines and knowledge regimes, justifies the prominence (and leadership) of *master* disciplines. Using 'I mean' is an affirmative way of explaining, while vagueness becomes a rhetorical instrument to signal banality, construct normativity and serve particular agendas. Foregrounding stereotypical assumptions is used to strengthen critique and orient to 'others', while *articulating two sides to a case* performs knowledgeability, rather than personal stakes, and shifting from 'I' to a group, to people in general, illustrates the

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entanglement of voices that have stakes in an issue. Finally, 'I don't know', 'maybe' and similar expressions mitigate responsibility to suggest solutions.

These are all ordinary ways of making claims, of managing accountability and positioning, but the workings of these tools are not necessarily obvious to those who use them. While the texts we have considered are very rich in terms of constructions and assumptions, they seem to invariably treat citizens as merely recipients of smart technologies. The key referent, *technology*, (widely cast) is commonly treated as neutral and even if some interaction with the innovation process is implied or put forth as a requirement to ensure successful outcomes, the value of *technology* as *de facto* positive and beneficial is most common place. Depending on context, people are treated as savvy users (for example, in arguing for the changing potential of the Internet) or as in need of education (for example, in talking about the digital skills agenda). Practitioners' talk may include the possibility of opting out of this vision of smart everything, however, in EC texts the vision is constructed as a one way street, a road map with a single road. At a closer look, this construction is particularly vague in pinpointing (human) agency and in so doing, the policy discourse is only accountable to stated challenges to vague categories of place, people and work, for the benefit of which the Digital Agenda claims to act.

This vagueness is also common in talking about 'citizens' in relation to innovation agendas. The citizen category is taken for granted, an unquestioned term in the EU context, connoting a relationship with a civic entity, the nation state and/or the EU via nation-state membership. Even when rights are problematized in relation to the citizen category, what citizenship is and how one is entitled to it still remains unproblematic. Therefore, non-citizens, asylum seekers, immigrants, minorities, people falling in one way or other outside the 'full member' boundary of the term, are rendered invisible. Having said that, accounts in policy circles imply that, notwithstanding citizenship, knowledge hierarchies are still a relevant way of seeing and categorising people, be it "people on the street" or savvy researchers.

The issue at stake, therefore, is persistent and deeply entrenched instrumentalisation of seemingly self-evident assumptions in a dominant discourse of smart: about society, individuals and groups, about agency and knowledge, and in the framing of societal challenges that can only be solved with scientific and technological advances. The consequences for ongoing (mis)communications across the SSH, ICT and policy domains begs the question if the European knowledge society is indeed taken seriously (see Felt, et al, 2007).

We acknowledge that we apply here our own assumptions and gazes, but sharing these kinds of insights with peers across the SSH, ICT and policy domains is a step forward in raising awareness of how innovation discourse is constructed – discourse of smart in particular. By the same token, it is a step in raising awareness of how discourse of smart can be deconstructed in order to unravel and 'see' its built-in assumptions and, thereby, begin to ask more openly if the constructs we come across are genuinely what the authors intend to convey.

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