UNIVERSITY OF UDINE

Ph.D Course in Multimedia Communication

XXV Cycle

Children of a lesser Tav. An essay on controversial participation

A thesis submitted for the degree of

Philosophiæ Doctor

Ph.D Candidate: Federica Amistani

Supervisor: Prof. Francesco Russo

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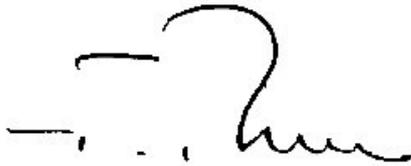
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Day of the defense: 12th April 2013

It always seems impossible until it is done

- Nelson Mandela -

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Abstract

Over the past 20 years, the management of the decision-making processes has become increasingly complex. The technocratic model of governance is in crisis. Controversies that arise in relation to the construction of large infrastructure projects are a tangible expression of this crisis. Decisions with a direct impact on the lives of citizens are no longer considered the exclusive prerogative of experts and politicians (Bucchi, 2006). Several attempts, both *top-down*, enacted from the institutions, and *bottom-up*, enacted by the citizens, have been made in order to widen participation and in so doing, to achieve different objectives such as: to give voice to interests and viewpoints otherwise unheard (Dalla Porta et al., 2005a), share the responsibility for decisions taken under conditions of uncertainty (Beck, 2000; Pellizzoni, 2005a), reduce conflicts. The internet has entered this scenario by opening new spaces for the exercise of citizenship. These new opportunities have taken place both in terms of additional possibilities to tackle thorny issues underestimated or ignored by the offline public debate, and in terms of alternative forms through which to exert a civic control on the power-holders (Rosanvallon, 2008; Tsagarousianou et al., 1998; Schlosberg et al., 2005). It is for all the world to see that today there is a widespread tendency among organizations, governments, committees, but also scientific groups, individual citizens and politicians to put online views, opinions, comments. By doing so each of these actors, publicly positions itself in relation to the others (Rogers et al., 2002).

This Ph.D thesis tries to explore the issues described above in the specific case regarding the construction of a high-speed line (Tav) between Venice and Trieste. In particular, after having explored the peculiarities of the two main approaches according to which the concept of participation has been addressed in the sociological field and having outlined the main features of the concept of e-participation, we seek to identify, with reference to the study of techno-scientific controversies, the opportunities and constraints of adopting a perspective that treats separately the top-down and bottom-up forms of participation. With the support of

the literature on techno-scientific controversies, a methodological approach has been applied to the case study that brings together *digital* - research methods based on the actual characteristics of the medium (e.g. tags, links, likes....) and *digitized methods* - traditional research methods exported online (Rogers, 2010; Marres, 2012) with the aim to account for the multi-dimensional appearance that public participation takes in the context of a techno-scientific controversy and in particular to value even the forms of participation that tend to escape the traditional approaches to the theme (that for this reason I named controversial). Participation has thus been investigated according to four dimensions derived from the literature: communication, opportunity, will and heterogeneity. The picture that has emerged shows that participation is both a matter of relational dynamics and a matter of knowledge construction processes. It highlights that the acknowledgment of diversity is a crucial premise for the fulfillment of participation in practice and it also shows that according to the case analyzed, the deliberative idea of participation is far from being realized both "online" and "offline". The idea that follows is that participation should be read as an ongoing process, which is built over time as the sum of individual actions, events, attitudes, affecting both the public and the private dimension of the life of every citizen.

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1

Introduction

The research project that will be presented in the next pages, lies essentially at the intersection of Political Sociology and Science and Technology Studies (STS), using the methodological contribution of the so-called program of digital methods.

Its general objective is to investigate the concept of public participation in the context of a techno-scientific controversy, with the attempt to emphasize the various, sometimes controversial, forms and meanings that it may take, in part thanks to the new technologies.

Specifically, the issue of participation will be framed within a specific type of techno-scientific controversies, that is those conflicts that arise about public works, exploring, in particular, the ways it has taken shape in the case of the construction of a high-speed rail line between Venice and Trieste. Given that in Italy the acronym Tav, that stands for high-speed train, has become a commonplace, making the label frequently used to describe the affair in the various aspects and geographical connotations, we wish to indicate, from the beginning, that it will be used also in the text of this work.

Although the issue of participation is an established topic in different disciplines, it is still widely debated. The reasons for its relevance are manifold. First, the fact that the government of public affairs has been made more complicated by the fact that the issues that we are facing are more and more characterized in terms of complexity, uncertainty, and interdependence, and that the decisions and choices that we have to make produce consequences and impacts that are less predictable and that are difficult to contain within clear boundaries, both geographically and in terms of disciplines. Controversies that arise in relation to the construction of large infrastructure projects, such as the one that will be the subject of the case study, represent this state of affairs well. The establishment of

the scenario just described has been accompanied by the spread of a generalized climate of uncertainty and mistrust that has engulfed even politicians and experts, questioning the convenience of delegating the decision-making processes to them.

This has had two main effects: on the one hand, it has meant that a growing number of institutions and governments started a search for strategies and tools to make the decision-making processes more transparent and inclusive, in order (as much as possible) to prevent conflicts from arising and to share the responsibility for the choices (Beck, 2000; Pellizzoni, 2005a); and second, the citizens, thanks to the greater opportunities of access to information, accept the imposition of decisions less and less, and alone or organized in groups they increasingly demand to be involved in the discussions about the issues that may affect their lives (Bucchi, 2006). With the advent of the internet, these processes have received a further boost, since further possibilities in terms of flow of information and public debate have been opened up. In describing this new situation which characterizes today's society, Grossi (2011) suggests that we are probably experiencing a new form of public sphere that challenges the traditional definitions of citizenship and publicness, a public sphere where online and offline, public and private, individual and collective, reason and feeling, interaction and organization, information and mobilization coexist and are intertwined.

As already said, through this research, we try to give emphasis to the various forms that participation can take in the context of techno-scientific controversy. The idea stems from the belief that with respect to this type of issue, the traditional approaches to participation, that can be essentially grouped under the labels, *top-down*, when they look at the inclusive processes triggered by the governments, and *bottom-up*, when they are instead interested in the initiatives that are started from the base, by the people being very focused, can only get a partial picture of what happens in the reality. In order to achieve this goal, we suggest a (partial) shift of perspective: the center of the procedures of data collection and analysis will no longer coincide with the subject of participation but instead will be represented by the subject of the controversy, that in this case is represented by the Tav Venice-Trieste. More precisely, according to this approach, the Tav Venice-Trieste issue, will be followed in its displacement among different arenas, first of all the media.

The idea of concentrating on the topic of the Tav Venice-Trieste stems from a number of considerations that will be better explained in the chapter that presents the case study and the methodology that have been applied (Chapter 4), but that largely depend on the challenges that it seemed to offer: the fact of being a topical issue, still at the center of public debate, still evolving, and therefore in line with

the requirements of the ideal controversy to study (Venturini, 2010a); the fact that it is a case that has, so far, been given little importance in studies and research, which tend to focus instead on the most popular case of the Turin-Lyon line; the fact that it involves different institutional and territorial levels, implying a potentially important role for the internet, at least for coordination functions; its being articulated in terms of a number of aspects involved and thus presumably of types of expertise involved.

The essay is essentially composed of two parts. The first part (Chapters 2 and 3), will try to summarize the main contents of the literature reviewed. It will be organized around two macro-themes: public participation and techno-scientific controversies. Public participation will be first defined through the conceptual point of view, through the use of some models that have been proposed in the literature and that we believe could be useful to define some of the key dimensions of participation. Secondly, we will try to give an account of the two alternative approaches to participation previously mentioned, top-down and bottom-up, highlighting the characteristics of the concept of participation that emerge when referring to one rather than the other perspective. Finally, we will outline the main features of e-participation, that is those forms of public participation supported by the ICT, with the intention of showing what the most debated points about it are. Then, we will try to frame the concept of techno-scientific controversy, with the aim of highlighting the reasons why it is interesting to study participation in such a context and trying to show the points of the literature developed around this theme that could be helpful to better define the concept of participation. In particular, we will focus on the concept of expertise, and thus on the dynamics that develop between different kinds of knowledge and especially between forms of accredited and lay knowledge.

The second part of the paper (Chapters 4 and 5) will develop the methodology first and then the data analysis. The chapter on methodology is divided into two parts. First, a brief introduction to the case study will be given, and therefore a description of the highlights of the Tav Venice-Trieste affair and a brief history, to show the main events that have taken place over time. We will then describe in detail the methodological choices that have been made. As mentioned before, the idea is to follow the controversial issue through various settings (Marres, 2005), online and offline. The data sources are: internet, a social networking site (SNS), namely Facebook, a local daily newspaper and some semi-structured interviews with some of the main protagonists of the story. The approach to the online sources will be done through both *digital methods*, that is research methods that are based

on the actual characteristics of the medium (e.g. tags, links, likes....) and *digitized methods*, traditional research methods exported online (Rogers et. al, 2002; Rogers, 2009; Rogers, 2010; Marres 2012). The analysis of the data will be performed according to some dimensions that appeared relevant in order to frame the case study and not according to the single data sources. In this way, online and offline are not treated as two separated spheres, and it becomes possible to better appreciate the interconnections between the various settings in which the issue may be discussed. These are essential elements, we think, for a thorough definition of participation. A final section will be dedicated to reassemble the various blocks under the umbrella of participation, both with reference to the specific Tav Venice-Trieste case and in a more general meaning.

2

On the concept of participation

2.1. The many faces of participation

The purpose of this research is, as we said, to explore the concept of public participation in the context of a techno-scientific controversy. First of all, it is necessary to briefly clarify the meaning of the adjective "techno-scientific", a term commonly used in the field of Science and Technology studies but possibly less easy to understand otherwise. According to Latour (1998), the word technoscience indicates

> all those elements concerning the scientific content, no matter how impure, unexpected or
> foreign they are (Latour,1998, p.235).

In introducing this term, the Author wishes to stress how talking about "science" and "technology" is an illusion in a time when the attribution of responsibility for scientific and technological issues seems to be more and more uncertain. Today, in fact, the scientific and technological issues appear to be less and less the exclusive product of the experts and instead appear as the product of heterogeneous networks of actors who, for various and diverse reasons, become interested and mobilise themselves around them. Thus, for example, a progressive closening of research and innovation has taken place; innovation has been increasingly considered as the result of the interaction of three poles: the market/companies, University/research and politics (the *Triple Helix* described by Henry Etzkowitz and Loet Leyesdorff, 1998), and finally, the lay public assumes a growing role in contributing to the definition of scientific and technological development.

The theme of public participation in scientific and technological issues has become the object of discussions, in sociology but not only, since the end of the 1960s, when events such as the Vietnam War, the students' revolution, the growth

of the environmental movements marked the rise of a new attitude towards the idea of technological progress: anti-scientific sentiments began to spread in the Western countries and programs aimed at the so called "public understanding of science" emerged also in the agendas of institutions, funding agencies and scientific organizations (Feenberg, 1999). A document that is widely recognized as a marker of this shift to a different consideration of the relation between science and the public is the so-called "Bodmer report", written by the Royal Society in 1985. In brief, the document claimed that an improved communication between science and the public would have entailed better decisions and a superior quality of life.

However, in the context of the contemporary western democracies it assumes, for a variety of reasons, further importance.

First, there is an increasing disenchantment towards the institutions of representative democracy, that challenges in particular, the delegation of the power to decide to politicians and scientists, who are widely perceived as being far removed from the daily world and it is especially their neutrality, their capacity to act in the name of the public good that is being questioned (Pellizzoni, 2005a; Bucchi, 2002). Moreover, the traditional mediators between them and the general public, such as political parties and trades unions are too losing their ability to represent all the segments of the population and to channel social demand (Pizzorno, 1996).

Secondly, in an interdependent context like the present one (see Beck, 1992); Giddens, 1994; Beck et al., 1999 Bauman, 2002), where the traditional societal configurations are weakened or disappear, the problems we have to deal with are more and more complex, and global in their scale, they are pervasive, multidisciplinary, they involve ethics and values, and their effects are long-term and largely unpredictable (Funtowicz, 1993; Lewanski, 2007). We need only to think, for example, of climate change: many models and theories have been developed to forecast its impacts; many contrasting visions exist about the extent of these impacts; several measures have been taken in order to manage these potential impacts that affect different sectors of life (private and public) and different territorial levels.

This ungovernability of issues has two main consequences. On the one side, experts are less and less able to give solid advice to the decision-makers, because the speed with which decisions must be taken exceeds their ability to collect the information required to assess the complex issues to be managed (Callon et al., 2001). On the other side - and this is partly linked to the first point that has been made above - the decisions with direct impacts on citizens' lives are no longer

considered the exclusive prerogative of the experts, and new categories of actors have entered the scene and demand to have a say. A case in point is the increasing number of committees or associations of patients that are formed today around thorny issues and that play an important role in passing information along to both other citizens and the "official" experts such as politicians, sponsors, scientist etc. (for a wider overview, see Bucchi, 2006; Bucchi & Neresini, 2008). This means a shift in the relation between science and the public who can no longer be seen as a mere recipient of information. Lay advice begins to be considered as an additional contribution to the understanding of a phenomenon (Wynne, 1992; Bucchi, 2006; Bucchi & Neresini, 2008). The same categories of experts and non-experts are being challenged: lay knowledge can no longer be seen as an inferior version of expert knowledge and techno-scientific issues can be treated less and less as purely scientific facts, appearing instead as "hybrid objects", as a blend of scientific, economic, social and cultural dimensions, or in other words as the product of an "*extended peer community*" (Functowicz & Ravetz, 1992), a heterogeneous and unstable network of actors with different backgrounds (experts, citizens, politicians, activists, enterprises…) (Callon et al., 2001; Bucchi, 2006)[1].

Third, the process of individualization which is typical of modern society, defies identities, backgrounds, the points of reference of the individual (Beck, 1992; Bauman,) and it redefines them according to a new scheme based on the Self. The fragmentation that comes from it tests those who rule: it questions, as we have just seen, the traditional figures of intermediation between the public and the institutions and makes us look for new strategies to channel the individual histories within a common framework.

The growing importance attributed today to the inclusion of new actors in the decision-making processes is also reinforced by the law. I have found it convenient to make a brief, and by no means exhaustive mention of the legal framework that governs participation in the scientific and technological fields because, during the interviews I did, many references were made in this direction. In particular, what has emerged is that, although the importance of public involvement is being widely stressed, there still are only few ideas on how to concretely implement it. Moreover, at any territorial level there is no reference to the degree of coercion to be attributed to the outputs of the practices undertaken and this fact certainly does not facilitate at all the putting into place of inclusive mechanisms.

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[1] The relationship between expert and lay knowledge will be further articulated in Chapter 2

With regard to Italy, a new interest in participatory practices began to emerge around the year 2000, influenced by the experiences of the World and European Social Forums.

Going more in depth with the legal references to participation that could help us to outline the framework in which my case study is embedded, at the European level, two of the best known references in terms of participation are certainly the Aarhus Convention and the European Landscape Convention.

As the United Nations Economic Commission for Europe (UNECE)'s website reads, the *Aarhus Convention* (UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters – signed on 25th June 1998) «is not only an environmental agreement, it is also a Convention about government accountability, transparency and responsiveness. It grants the public rights and imposes on Parties and public authorities obligations regarding access to information and public participation and access to justice. The Aarhus Convention is also forging a new process for public participation in the negotiation and implementation of international agreements». On the other hand, the article no.5c of the European Landscape Convention states «[Each party undertakes] to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies».

At the national level, there are many articles of the Italian Constitution that make some reference to the idea of public participation. To be more precise, Article 1 c.2 says «Sovereignty belongs to the people and it is exercised by the people in the forms and within the limits of the Constitution». Article 3 c. 2 states «It is the duty of the Republic to remove those obstacles of an economic or social nature which constrain the freedom and equality of citizens, thereby impeding the full development of the human being and the effective participation of all workers in the political, economic and social organization of the country. According to Article 49 «Any citizen has the right to freely establish parties to contribute to determining national policies through democratic processes» and finally Article 118 chapter IV states «The State, regions, metropolitan cities, provinces and municipalities shall promote the autonomous initiatives of citizens, both as individuals and as members of associations, relating to activities of general interest, on the basis of the principle of subsidiarity».

But it is in particular the so-called "Legge Obiettivo" (L. 443/2001) that defines the framework within which the realization of public works takes place. This Law aims at simplifying the procedures for the approval of public works and, in so

doing, entails a significant weakening of the power of intervention of local authorities. As we will see further on in the case study, this Law has itself become part of the controversy since it influences to some extent the fulfillment of participation.

The Code of Local Self-government (Testo Unico degli Enti Locali - TUEL) itself gives some indications of public participation. In article 8, entitled "People's participation" (art. 8) it states: «1. The municipalities, even on the basis of neighborhood or hamlets, enhance the free forms of association and promote popular participation in local administration bodies. The relationships of these forms of association are governed by statute. 2. In the proceedings for the adoption of acts affecting subjective legal situations forms of participation in accordance with the rules laid down by the Statute must be provided, in observance of the principles established by the Law of 7 August 1990, no. 241. 3. The statute must provide forms of consultation of the population as well as procedures for the admission of instances, petitions and proposals of citizens, as individuals or in groups, to promote interventions for an improved protection of collective interests and there should also be some guarantees for their timely basis. Referenda could also be provided at the request of an adequate number of citizens. 4. Consultations and referenda provided for in this Article shall affect the exclusive responsibility locally and cannot be held to coincide with the provincial, municipal and district elections. 5. The statute, inspired by the principles of the Law of March 8, 1994, no. 203 and Legislative Decree 25 July 1998, no. 286, promotes forms of participation in local public life of EU citizens and foreigners legally residing in the territory it rules».

Anyway, as already mentioned, it is a matter of fact that the present context and in particular the instruments of representative democracy and the traditional models of governance of techno-scientific matters no longer seem sufficient to overcome the institutional crisis we are experiencing. If this gap on one side, has sometimes generated anti-political forces and populist suggestions, on the other side, as we will see further on, it has also stimulated the search for new and more effective forms of public engagement (Raffini &Viviani, 2011; Allegretti, 2009).

In the techno-scientific domain, public participation can be seen as a set of diverse situations and activities, more or less spontaneous and structured, through which non-experts are involved in the processes of agenda-setting and decision-making, in the formation of policies, and in the production of knowledge (Bucchi, 2006). So far there are many institutions that are looking for strategies to make the decision-making processes more transparent and inclusive in order to share with

other stakeholders the risks of choices made under conditions of uncertainty and to avoid or, at least mitigate, conflicts (Beck 1986; Functowitz & Ravetz, 1993; Giddens, 1994; Beck, 2001; Pellizzoni, 2005a). And, in addition to that, there are many examples of citizens, alone or in groups who do not accept that others should decide autonomously in their territory and ask for, or create for themselves, instruments and opportunities to make their voices and interests heard (Della Porta & Diani, 2008; Bucchi, 2006). As will be discussed in more detail further on, this already many-sided scenario has been further enriched by the possibilities for participation opened up by the Internet.

One of the aspects that I expect to emerge from this chapter is precisely the variety of meanings that can be attributed to the concept of public participation and the variety of forms it can be translated into, since I am convinced that this is one of the factors underlying the difficulties that are encountered when trying to achieve participation in practice. Thus, the chapter is organized as follows.

First, I will give a general overview of the concept of public participation in the sociological field. For the sake of clarity, given the richness of the studies and researches on the topic, since the focus of my research is public participation in the specific techno-scientific field, I will concentrate only on some general lines that emerge from the literature. Thus, I will present the models that I draw my inspiration from to formulate my research questions and to analyze the data collected in the empirical part of my task. Then, I will show that there are two main approaches to the study of participation in practice: one focuses predominantly on the experiences of participation that can be activated by the institutional level (top-down approaches), the other, based especially on the literature on social movements, seeks to enhance those more "spontaneous" forms of participation, that are activated by the citizens (bottom-up approaches). Finally, I will try to give a picture of what the debate on electronic participation (e-participation) is today, by focusing on the main opportunities and obstacles that the Net poses to the concrete realization of public participation in the belief that today it is not possible to disregard it when dealing with such kinds of issues.

2.2. Participation: an overflowing concept

The concept of participation has been talked about among different disciplines for centuries and the resultant picture is very complex and only partially accomplished.

The Italian dictionary (Devoto Oli, 2012) gives four main definitions of the verb "to participate". It means: 1. one's presence or intervention in a matter of public interest or order 2. but it can also be referred to one's involvement, along with others, in the possession or use of a good or an economic activity 3. it can also indicate the expression of interest to others' affective affairs 4. or the communication of happy or painful events.

The variety of situations covered by these four definitions gives an idea of the semantic richness of the term "participation".

Several studies have tried to give an order to the concept of participation, highlighting those traits that could be useful either to identify its semantic boundaries and to distinguish between the many forms it can take in everyday life. Some traits play an important role in almost all the studies (for example, the direction of the communicative flow) others become more or less central depending on the specific field of study that is being investigated (for example, the question of expertise, has a particular relevance when dealing with the scientific and technological domain).

Being aware that I am shedding light only on a small part of the vast universe of sociological studies on participation, I will concentrate on the four models which provided me, each with its peculiarities, the clues to reading the theme of participation in my case study. Each of these models helped me in better define some keywords that I found useful in order to explore the meanings the concept of participation has assumed in the controversy on the Tav Venice-Trieste. In fact, they efficaciously summarize the content of my research questions and guided the collection and the analysis of the data coming from the Tav Venice-Trieste case. The keywords I am speaking about and that will be specified more clearly further on, are: *will*, or the individual propensity to be actively involved in issues affecting the community of which one is part; *opportunity*, or the availability of spaces and tools that allow the concrete realization of participation; *communication*, or the ways in which information and knowledge about the object at the center of participatory practices, circulates between the various social actors involved.

The first model I will present is the scale for participation constructed in 1986 by Sherry Arnstein. This is probably the most cited model among the studies on public participation. The Author identified a scale made up of eight different rungs. The first two levels "Therapy" and "Manipulation" represent what she calls "non-participation", that is participatory experiences whose

real objective is not to enable people to participate in planning or conducting programs, but to enable powerholders to "educate" or "cure" the participants (Sherry Arnstein, 1986, p.2).

The following three rungs, "Information", "Consultation" and "Placation" represent the level of "tokenism", that means that citizens can hear (first case) and hear and be heard (second case) but there is no guarantee that their opinion will be taken into account. "Placation" usually represents an upper level of participation but even in this case the extent of the citizens' advice is still defined by the powerholders. The last group of rungs (called "citizens' power");" Partnership", "Delegated power" and "Citizen control" refers to an increasing degree of influence of citizens' advice: to various extents, citizens can negotiate and engage in trade-offs till they reach full managerial power. There are two key points of this model: the *direction of the flow of communication* and the *degree of coercion* of the possible contribution provided by the citizens. Each rung distinguishes itself from the others according to the extent to which citizens are actively involved: in the two lower rungs, citizens are passive recipients of information, they acquire more power going up the ladder, and in the end they come up to share the responsibility for the decision. It goes without saying that as the degree of citizens' involvement grows, so does the degree of influence that is attributed to their contribution.
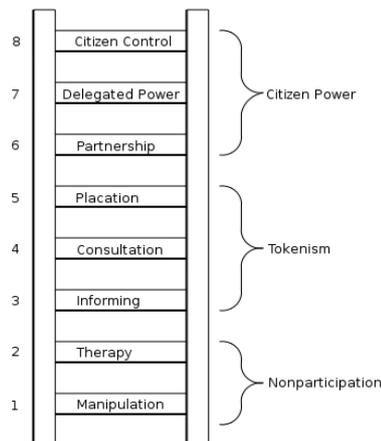

Figure 1 - Arnstein's ladder of participation. Source: Arnstein, 1986

The second model I will introduce comes from an article written by Luigi Pellizzoni in 2005 and entitled "Cosa significa partecipare?" (What does

participation mean?[2]). Here, the Author explores the idea of participation by mainly referring to the works of two Italian scholars, Maurizio Cotta and Paolo Ceri. Based on their models, he first traces the boundaries of participation. He identifies in the pair of concepts of *will* (to act) and *agency* (the degree according to which one can affect the course of events) the discriminating element to distinguish between what is actually participation and what, while much resembling it, is not. He argues that in order to be able to talk about participation, it is necessary for the subject to play a proactive role, to be motivated (and obviously able) to get involved, both with respect to the possibility of engagement, therefore to participate, and with respect to the configuration of the final decision/choice. In this way, the Author says, it is possible to distinguish among three levels of participation. The first one is that of cooperation in the accomplishment of a result: we can speak of participation only if cooperation is extraneous to any prescription of role and derives instead from the personal conviction of the individuals involved. The second level concerns the power to affect a collective decision on the direction to take, thus involving the dimensions of the degree of distribution of power among the actors and their power of coercion on the final decision. The last level, focused on the power to affect the structure of the decisional process represents the highest level of participation in the sense that it gives the involved actors the power to influence the very rules through which participation is put into practice. Once he has set the boundaries of participation, the Author identifies the two conceptual pairs of public/private and political/civil as the analytical dimensions whose intersection enables the characterization of the internal landscape of participation. The distinction between the two poles of political/private lies in the power of coercion of the decisions that are made and in particular in the extent to which they affect people other than those responsible for the decisions. On the other hand, the distinction between public/private lies in the existence of the so-called "third party" in the name of whom we feel responsible and somehow obliged to justify the decisions made: while in the private sphere this kind of sentiment is almost absent, it represents a cornerstone for the functioning of the public sphere

The various forms that participation can become in reality are positioned in the space thus identified. It should be said how, with respect to the same issue, different forms of participation could well be activated either in parallel or one being the evolution of the other (I'm getting involved in an issue which affects my

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[2] My translation

community; I'm gathering information about the possible solutions which could be adopted; I go and speak to the Mayor; I organize a public assembly; I collect signatures for a petition…)

Beyond the interesting insights with respect to the "positive" meanings of participation, the article also proposes a reflection on the dimension of "non-participation". Even if it seems to lie outside the contents of the chapter, I considered it appropriate to present it here, in brief, as I believe it is useful to better understand the findings from the case study. Pellizzoni deals with this issue by crossing two dimensions: *will* and *opportunity*. Four cases emerge: 1) you want and you can participate (a situation that he calls "active affiliation"); 2) you do not want and you cannot participate (called "non involvement"); 3) you want but you cannot participate, because you do not have the right or the skills to do it ("exclusion"); 4) you could participate but you do not want to be involved, because you do not think that participation is useful, because you are not interested in the process or in the issue at stake, because you do not consider yourself skilled enough to participate ("self-exclusion").
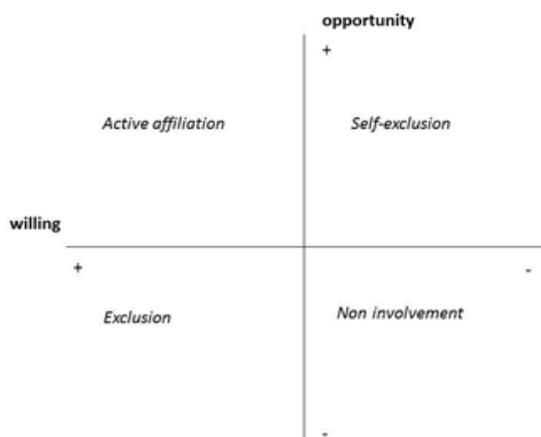
Figure 2 – A map for "non-participation". Source: after Pellizzoni, 2005b

According to this model, in order to grasp the expressions of participation, *agency* again occupies a central place but two other elements emerge as relevant: the aptitude of the single individual to participate (*will*) and the actual availability of spaces where this aptitude can be applied (*opportunities*).

Another interesting attempt to define thoroughly the scenario of participation is the one suggested by Rowe & Frewer (2005). Here there are only three rungs of the

ladder and they differentiate one from another according to three variables: 1) the degree of the public's engagement; 2) the extent the public can influence the final decisions; 3) the direction the information flow can assume. The lowest level, that of *public communication*, involves top-down communication and a one-way flow of information. In this case, citizens are basically passive actors, just being given the possibility to receive information and not being asked to give feedback on it. At this stage, the only possible case with the public having an active role is when the information is given in response to a public request.

The mid-level is labeled *public consultation* and gathers those situations in which citizens are allowed to give a feedback to the decision-maker and a two-way relationship is established. Public involvement is somewhat greater, even if the discussion process and the topics are still managed through a top-down logic.

The last stage is that of *public participation*. It occurs when citizens are actively engaged in the definition of the decision-making process, its aims and topics. Citizens and decision-makers are at the same level: they can both propose the issues and options at stake. In spite of the dialogic pattern, in this case too the final decision remains a prerogative of the government. In another article entitled "Public participation methods: a framework for evaluation", Rowe and Frewer (2001) identify two main families of criteria to evaluate the procedures of public engagement. The first one, that of the *acceptance criteria*, includes the characteristics of the method that contributes to making it acceptable to the wider public, that group made up of those who are not directly involved in the participatory procedure; the other one, named *process criteria*, includes those that ensure that the method takes place in an effective manner. Among the acceptance criteria the Authors include: *representativeness* (of the participants with respect to the wider affected public they belong to); *independence* (from the influences or control of the sponsors or of other strong interests); *early involvement* (the public should be involved in the process as soon as possible); *influence* (of the output on the final policy or decision) and *transparency* (of the process). Process criteria are defined in terms of: *resources* (information, human, material…); *accessibility*, that is, to what extent the resources necessary to successfully fulfill their brief are accessible to the participants; *task definition* (the nature and purpose of the participation exercise should be clearly defined from the outset); *structured decision-making* (the participatory exercise should use and provide appropriate mechanisms for structuring and displaying the decision-making process); *cost-effectiveness* (of the procedure). On the one hand, the variety of these criteria proves once again the richness of the term "participation". On the other hand, it

clearly highlights the difficulties of identifying and keeping under control all the variables which may affect the effectiveness of a participatory procedure.
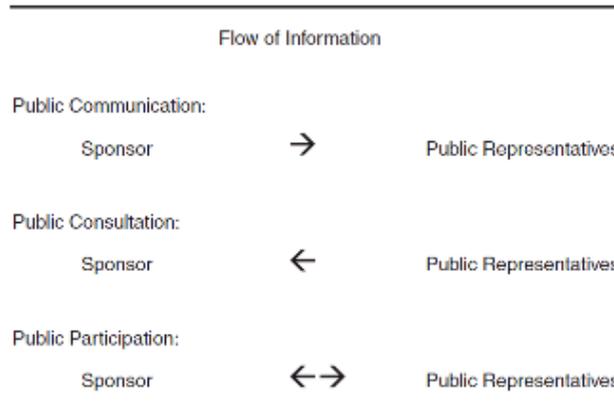
Figure 3 – A typology of the mechanisms of public engagement.
Source: Rowe and Frewer, 2005

The last two models I would like to cite directly concern the techno-scientific domain. The first one was developed by Michel Callon (1999). I find it very striking because it is focused exactly on the dynamics that take place when a controversial techno-scientific topic is discussed. The Author's typology rests on three criteria: 1) the legitimacy of the lay public's participation in the debate; 2) the potential contribution of each actor to the process of knowledge production; 3) the role each actor could play in the processes of production and dissemination of the scientific knowledge. Thus, three cases can occur: 1) *public enlightenment*, or educational model, characterized by the predominance of a unidirectional flow of communication between scientists and citizens. Scientists are the only ones that own the necessary competences to properly define a problem, to manage the research process and to produce and disseminate the information related to the problem at hand. On the other hand, citizens do not possess enough scientific knowledge to deal with the issue being debated; 2) *public debate*, according to which the contribution of citizens' knowledge is thought to enrich the problematization of techno-scientific issues. In this case, although citizens are given the opportunity to interact with scientists in public discussions, the production of scientific knowledge remains a prerogative of the scientists; 3) *co-production*, which assumes that citizens hold relevant experience related to the problem and they possess the cognitive and discursive competencies necessary to take part in the production of scientific knowledge.

Unlike the other models presented, in this case it is *knowledge* that is central. Knowledge as a mechanism to prove the legitimacy of the inclusion of a point of view; knowledge as an element that is exchanged between the actors involved; and finally, knowledge as the product of the interactions between the actors involved. The ways through which knowledge is exchanged, communicated and circulates among the actors involved and the contents of this knowledge become thus key elements to investigate participation.

I draw the last model from Bucchi & Neresini (2008). This model has many points in common with the previous one. It rests on two dimensions: a) the intensity of the cooperation among the different actors involved in the processes of knowledge production, or in other words how open the process of knowledge production is; b) the degree of spontaneity of the participatory processes, which also means how much the procedure is formalized, framed by institutionalized schemata.

Both dimensions can be seen as a continuum, thus enabling different situations that go from a zero degree of participation (deficit model) to more stable forms of cooperation among experts and non-experts.
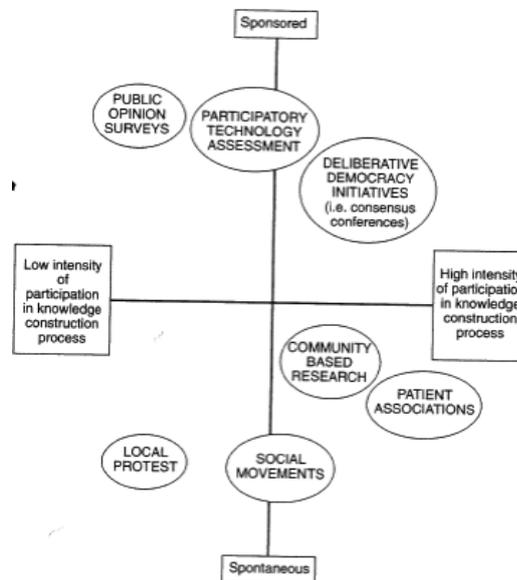

Figure 4 - A map of public participation in science and technology (S&T).
Source: Bucchi & Neresini (2008)

In this latter case the key dimensions to define participation are undoubtedly knowledge, and in particular the ways through which its production is articulated; and secondly, the boundaries of opportunities within which participation could occur, and which, as we mentioned, could be more or less free or institutionalized.

The discourse about the spaces of opportunity emerges particularly clearly in addition to this latter model, and in the one suggested by Pellizzoni, who then divides it, as we saw, in terms of public/private, civil/political.

To conclude, three dimensions, derived from the four models above presented, seem relevant to trace the meaning of participation. We are talking of: (flow) of communication, will (agency) and opportunity. The forms they can take in the practice and the different ways they can combine give rise to the variety of means and initiatives for participation. Generally, as we will see in the next section, participatory initiatives are grouped into two macro-categories, named *top-down* and *bottom-up*. As the these labels fairly recall, the main distinction between the two depends on whom activates the participatory experience, or if it is started from above, by the institutions, (top-down) or from below, by the people (bottom-up). As we will see, both approaches present opportunities and obstacles with respect to the possibility of fully translating the concept of participation.

2.3. A top-down approach to public participation

In the last 30 years, there has been a strong experimentation of strategies for public participation and several attempts have been made to give an order to the universe of methods that have been put into practice (Callon et al., 2001). Nevertheless, the results of the recourse to participatory and deliberative mechanisms are anything but predictable, since, as will be shown in the next few pages, several variables must be kept under control concerning the procedures, the participants, the context of implementation, etc.

Presented by their advocates as a means of citizen empowerment, participatory practices are often perceived and rejected by citizens as being new means in the powerholders' hands to channel the discordant voices while having no tangible effect on the final decisions.

According to Allegretti (2010), the output of a participatory experience can be seen as the result of a process of participatory democracy only if it comes from an interaction between the institutions and the public. This interaction can take various forms: practices that are usually labeled as "participatory" are often very different

from one another. It may happen that single practices can be used in combination or that the same practice can be applied differently, according to the contexts or the contingent needs. As a consequence, the already problematic systematization of the term, that we have seen in the previous paragraph, is challenged again.

In the following sections, I will briefly explore some of the practices that have been activated till now in order to extend the right to have a voice to a larger number of social actors, especially those traditionally excluded because they were considered not knowledgeable enough to take part in the debate concerning thorny issues such as, for example, the environment, health and town planning. I will present what I think are the most significant examples, with reference to the case discussed in the empirical part of this paper. Obviously, the picture that emerges is not fully exhaustive reflection of what happens in practice.

One of the most popular participatory methods is that of *participatory budgeting[3]*. It is a deliberative process that lasts throughout a year and gives citizens the opportunity to decide how to allocate part of the Muncipal budget. It starts in autumn and ends in spring with the budget approval by the Municipal Council. It involves three parallel streams of meetings: neighborhood assemblies (that do the needs analysis, set priorities and choose their delegates), "thematic" assemblies (one for each policy sector, that verify the feasibility of the proposals in terms of time and costs), and meetings of delegates for citywide coordinating sessions. The Porto Alegre model has been exported and adapted to several other countries, including Italy (e.g. in the cities of Pieve Emanuele, Grottammare, or in the Municipio 11 of Rome). While it seems that the Porto Alegre experience brought about a more equal distribution of the resources between neighborhoods and a strengthening of social capital, elsewhere, these positive effects have been less evident (Allegretti, 2010).

An example of top-down practices closely related to the field of science and technology (S&T) are the participatory developments of *Technology Assessment (TA)*. In its original form, Technology Assessment was a political instrument in the service of the members of the American Congress: by using objective calculation techniques a group of experts aimed at forecast and assess the impacts of an innovation. The innovation was considered the point of origin for whatever would occur, it was assumed to maintain its characteristics over time, and its impacts were

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[3] The first experience (called orçamento participativo) took place in the city of Porto Alegre (Brazil) in 1989, at the request of the Partido dos Trabalhadores, after they won the elections. The participatory budgeting was conceived as a means to involve citizens in the decisions concerning the distribution of the municipal budget within the 16 neighborhoods (regiões) of Porto Alegre.

supposed to materialize on a known or at least given backdrop (Rip, 2001; Limoges, 1993). During the 1980s, the original American model of TA was exported to other countries, especially Europe, and evolved into several approaches which are to some extent influenced by the theories of democracy. In these latter approaches, although the overall philosophy of the original TA is preserved – to limit the negative externalities of the application of trial and error methods in the management of technology in society through the anticipation of the potential impacts and the integration of the resultant feedbacks in the decision-making process (Shot & Rip, 1997) - there has been a change in the vision of innovation and its impacts as they are seen here as co-produced by science and society. The procedure thus assumes a new agenda-building function in the sense that the scenarios which may be produced are supposed to guide action in the present, creating irreversibilities in the technology design, aligning actors' interests or stabilizing the existing networks around a limited range of options, thus facilitating the decision-takers in their tasks (Rip, 2001; Ling, 2002; De Laat, 2002; Berkhout, 2006). The participative evolution of TA has allowed it to have relevance to some important aspects concerning the introduction of innovations. For example, they can promote the interaction among different actors and by so doing they encourage the unveiling of the frames, background theories, personal preferences and social values behind the participants' positions showing that different individuals can attribute different meanings to the artifacts under scrutiny, and allowing us to identify the values and visions that drive technological change (Grin & Van Der Graaf, 1996). In addition, they can be implemented at an early stage of technology development, thus implying a broadening of the design, development, and implementation processes and an ongoing construction of the new technology (Schot and Rip, 1997).

Two interesting methods through which the participatory versions of Technology Assessment have taken shape in practice are the *Consensus Conference* and the *Public Debate* (Débat Public).

Consensus conference was introduced in Denmark in the year 2000. This method implies that a group of citizens chosen randomly and in such a way as to be to some extent representative of civil society, meets to discuss issues of a scientific or technical nature. Participants have no previous knowledge of the case and are not directly affected by the decisions at stake. First, usually during a weekend, the participants gather in small groups, meet with well-established experts for training sessions in which they are given the knowledge they need to understand the debates that are going to take place. During a second weekend, they are asked to prepare a

set of questions to structure the meetings with the experts. Then, the conference itself takes place, during which citizens and experts (this time chosen by the group) discuss and work toward consensus[4] (Bobbio, 2002).

The practice of *public debate* has been much discussed in Italy in the last few months and particularly about the most debated Tav line in Italy, that is the one to be constructed between Turin-Lyon[5]. It is part of the family of methods called "public inquiries". As a general rule, public inquiries aim first at assuring a higher degree of transparency to the contents of a controversial project and to the decisions that are being made on it; and secondly they allow all those who are affected by a project to have their say. The very practice of public debate was developed at the beginning of the '90s, in the context of the local protests against the construction of the high speed railway (TGV Mediterranée) between Lyon and Marseille. So far, it has been mostly used to prevent or solve environmental or territorial controversies. It is the only practice of this type that has been institutionalized, with the establishment of the National Commission for Public Debate (Commission National du Débat Public) through the Barnier Law (1995, partly modified in 2002). If the cost of the work to be realized exceeds 300 million euros, the opening of the debate is automatic, otherwise it is up to the Commission to open it or not. The aim of the debate is to discuss a preliminary idea of the project, in order to make changes possible. The management of the process is delegated to a special commission identified by the National Commission. The project proposer has to present a report, written in simple language, to motivate the need for the project and to illustrate its features. Every association, group or committee can make proposals and observations on the report. The report and the observations are gathered in the *Cahiers d'acteurs* and made public through an information campaign. The debate lasts four months. It takes place in the form of open local meetings, some of which are focused on particular aspects of the project (e.g. the environmental impact). The aim is to create the conditions for a public discussion between advocates and opponents based on relevant facts. At the end of

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[4] See also http://partecipazione.regione.emilia-romagna.it/tecnico-di-garanzia/servizi/linee-guida-per-la-proget--tazione/Consensus%20Conference.pdf

[5] In March 2012, in order to avoid or at least contain conflicts, such as the ones that have arisen in connection with the high speed railway Turin-Lyon, the Italian government and the Minister of Development, Corrado Passera, introduced new rules for public works. Mario Virano, president of the Observatory on the construction of the Tav Turin-Lyon, has a mandate to carry out studies on possible mechanisms of involvement of the population. The French practice of public debate is identified as the model from which to draw inspiration. For more detail see: http://archiviostorico.corriere.it/2012/marzo/04/Sei_mesi_consultazioni_sui_progetti_co_8_12 0304018.shtml

the debate, another report is written, that collects all the arguments for and against the project. In the subsequent three months the proposer has to decide whether to modify, maintain or abandon the project. According to Bobbio (2010), 31 experiences of débat public have taken place since 2002. In five cases, the projects under discussion were abandoned while in the remaining 26 the projects continued, often with the introduction of some changes. In Italy this practice is hardly ever applied. It has to be said that in Tuscany, the law on participation of 2007 identifies the preventive public debate as a device to be applied in the context of large infrastructure projects.

The lowest common denominator of the practices just described is "deliberation", intended as discussion on the different aspects of the topic, under conditions of freedom and equality. Based on the logic that the best argument will prevail (Habermas, 1996)[6], their aim is to reach a consensus through discussion. Obviously, these conditions bring about a high risk of manipulation but the advocates of these mechanisms believe that, at least at the micro-level, it is possible to approach the ideal conditions that would permit the translation of deliberative democracy into practice.

Anyway, for the sake of accuracy, it should be said that not all the participatory procedures involve deliberation. A number of them derive, for example, from social and market research and mean to achieve participation through consultation. It is the case of *opinion polls*, surveys of public opinion from a particular sample, that have been used since the 1980s on the initiative of public authorities and big multinational companies to measure what was called "a degree of social acceptability"; or *public hearings*, that are official proceedings of a governmental body or officer, during which a small group of interested citizens is accorded the right to be heard: they can make submissions, ask questions or register objections about a problem or a project. Another non-deliberative participatory device that I believe it is important to mention, since it is widely used by social movements (and also by the local committees analyzed in the case study) is a *petition* (which is available also in an electronic version). A petition is a requirement generally addressed to public authorities, in order to raise an issue. It is a mechanism provided by both the Italian (Law 50 of the Constitution) and European Union (Article 4 of the European Parliament) legislation. The Italian law demands 50,000

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[6] Habermas (1996) describes the public sphere as a «network for communicating information and points of view [...] the streams of communication are, in the process, filtered and synthesized in such a way that they coalesce into bundles of topically specified public opinions» (p.360)

signatures (validated by the Supreme Court) to file a bill in Parliament and 500,000 signatures (validated by the Supreme Court) to hold a referendum.

But what are in general the potential opportunities and dilemmas opened up by the implementation of participatory practices?

According to the literature, the participatory methods that involve deliberation promote civicness, foster the circulation of information and the confrontation among different perspectives and increase the legitimacy of the decisions. (Pellizzoni 2005a). In short, we can say that the main advantage brought about by the implementation of participatory methods concerns the learning process that could result from the more or less audacious contamination between "experts" and "non experts". Through the participatory exercise, its "sponsors" can collect more comprehensive and broader information about societal concerns and visions, while citizens can improve their knowledge of the issue and the procedure of decision-taking. In the "era of distrust", the inclusion of different perspectives may hold agencies and the citizens themselves more accountable, sensitive and aware of the choices made individually and collectively, in order to manage the common good (Schlosberg et. al, 2005). Unfortunately, it is undeniable that participatory experiences have so far been fragmented and often disconnected from the real decisional moments. The lack of a central coordination able to include these practices within a coherent design contributes to nurturing the feeling of disillusion towards practices which appear to end up nowhere.

The points of concern typical of the exercise of the participation procedures classified as top-down could be split into "procedural" and "contextual". According to the procedural dimension it happens that if not properly managed, the practices based on deliberation can fail «to strengthen the weak and weaken the strong» (Callon et al.2001) and lead to conformism, polarization or manipulation. One possible risk is, for example, that the positions of the minorities remain latent and are absorbed by those of the people with a stronger ability to support their ideas. Another risk is the creation of an artificial public sphere that marginalizes those who express dissent (Raffini & Viviani, 2011). In the words of Loïc Blondieux (2004): «Are participatory experiences sites for integration or factories for political exclusion?». Moreover, it is unfortunately not unusual that these procedures are set up without a clear intention to give the citizens a real possibility to make their voices heard but only to guarantee a positive return on image for their promoters or for reaching consensus (Irwin, 2006). In this case, there could be a gap between *official* aims, namely more institutional transparency and openness, increased public involvement, increased civicness and *actual* aims, namely reinforced control

over society (Raffini & Viviani, 2011). It goes without saying that if these conditions do occur, public trust in the institutions and its willingness to participate will be discouraged: as said before, the apparent opening of the decision-making turns out to be just another means in the hands of stronger interests to gain legitimation and the possibility to have a say turns out to be just a fragile illusion.

Concerning the contextual level, an interesting point to be made when studying participatory procedures is that they have both an inside and an outside. Their results do not affect just the actors that have been actively engaged in the process but must be extended to a wider public. This is a matter of identifying the most appropriate criteria to define the representativeness and the competence embodied by those who participate and thus legitimatize the choices that have been made. But the matter of properly translating the outcomes of the participatory exercise among those interests who were not involved is not so obvious. A possible disconnection between the "artificial" participation (the one that takes place gathering common citizens together in a highly structured place) and "real" participation (the one daily experienced by committees, associations, movements and individual citizens) may occur and as a consequence the outcomes pursued through the participatory experiences may be nullified or at least belittled (Grunwald, 2004).

The last important aspect that I will mention concerns the degree of coercion of the participatory procedures' outcomes on the final decisions or results. This is one of the most discussed aspects in the literature and also in the daily discussions about participation. The lack of coercion is considered one of the main reasons for the negative attitude of the public towards the participatory experiences and for the feelings of distrust towards those who organize them. That is why scholars usually suggest somehow including the outcomes in the final decision or results, at least to explain why they were not pursued, even if the final decision goes in the opposite direction.

When the public feels that it has something to say and that the spaces opened up by the institutions are not enough to express it in the best way possible, it may decide to follow two paths: asking those who govern to create new opportunities or creating them by itself. Let's see in detail what this really means.

2.4. A bottom-up perspective on public participation

The aim of this section is to briefly present another possible perspective for the study of participation, that stems from the initiative of common citizens. An

essential contribution comes from the literature on social movements. I do not want to dwell on this but only to highlight some points that are relevant for my line of argument.

According to Bucchi (2006) today we are witnessing a politicization of techno-science in the sense that the exposure of science to the public increasingly often occurs in the form of collective mobilizations. Over the last two decades, local associations, and within them local committees, are becoming more and more important, representing the alternative way to try to have a voice in the choices that affect our (future) lives. Local committees usually have a sort of double soul: they rise around a single, local issue but actually they encompass themes of wider social extent (e.g. alternative modes of development; the fight against corruption; the protection of the common good, etc.), using protests as the main channel to express themselves.

In the environmental field, it is not rare for the different initiatives promoted by local committees to express their opposition to an infrastructure to be located in their territory, to be labeled as belonging to the so-called "Not-in-my-backyard (Nimby) syndrome".

> In plain language, NIMBY is the motivation of residents who want to protect their turf. More formally, NIMBY refers to the protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighborhood. Such controversial developments encompass a wide range of land-use proposals, including many human service facilities, landfill sites, hazardous waste facilities, low-income housing, nuclear facilities, and air ports. Residents usually concede that these "noxious" facilities are necessary, but not near their homes, hence the term "not in my back yard (Dear,1992, p.288).

Put it simply, Nimby is mentioned to explain every episode of local resistance against a technical option in terms of ignorance or selfishness of the residents.

According to this vision, local opposition to new projects or infrastructures is the result of a mere cost-effectiveness calculation. Local residents do not accept new projects or infrastructures because they view them as bringing disadvantages for a few people (them) and advantages for many, mainly those living far away from the territory directly concerned in the construction and functioning of the infrastructure (Bobbio,1999). Moreover, they are often accused of being reluctant to dialogue and of putting themselves plainly against and outside parties and institutions (Raffini & Viviani, 2011; Della Porta &Piazza, 2008).

To be precise, several labels have been created in order to differentiate the situations of local resistance that can occur. These labels are mainly based on the

extent of the territory in the name of whom the resistance has begun: Lulu (locally unwanted land uses), Noos (not on our street), Niaby (not in any back yard), Notpe (not on the planet earth), Banana (build absolutely nothing anywhere near anyone), Cave (citizens against virtually everything), Nimey (not in my electoral yard), Nimtoo (not in my term of office).

Obviously, interpreting local resistance in terms of Nimbyism does not stimulate the inclusion of these points of view in the discussion.

Studies and researches have shown the limits of adopting a Nimby perspective. First of all, the use of the above-mentioned labels lead to the misleading consequence to treat the public as an undifferentiated whole: the public is instead made up of many individuals each of them with his/her own reasons and backgrounds (Irwin, 2006). Different attitudes may co-exist within the same group: beside the more radical and protest-oriented ones, who *a priori* refuse everything that concerns institutions and parties, there are those who are more open to discussion and do not reject the idea of politics in itself but only oppose a specific combination of its functioning and actors (e.g. corruption, self-interest, unreliability). In both cases there is a rejection of the elites in force but the two approaches are different in their objectives and in their effects on democracy (Della Porta & Piazza, 2008). Secondly, citizens' resistance does not necessarily mean a mere deficit of knowledge or an irrational sentiment of place attachment. According to the findings of some researches (see for example, Burningham et al., 2006; Devine-Wright, 2005; Jobert et al., 2007, Dear, 1992), the characteristics of the context where an infrastructure is going to be placed should be taken into account in order to get an idea of the likelihood of public resistance to take place. Of course, this means not only considering geography and landscape, but also history, economic tradition and last but not least, socio-psychological factors, such as the perceived reputation, the credibility and fairness of the infrastructure/project sponsors and developers within the local community; the characteristics of the facility to be built (e.g. its size, the number of similar facilities in the same area, its operating procedures).

The organization of a bottom-up participatory initiative, either as a small event in a village or a boycott campaign on a large scale, is still an articulated process which requires that some conditions are, at least partly, met. A state of shared dissatisfaction is just the basis for a protest to start off, as the fulfillment of a number of other conditions might influence it course. For example, to act in a socially cohesive territory, to appeal to universally shared values, full of symbolic content and to be able to break people's hearts, to skillfully manage the media are

all elements on which the extent of the success of a protest depends, as these factors contribute to the visibility of the issue also outside the local context (Della Porta & Piazza, 2008; Amistani, 2011). Always in relation to the resources for a greater probability of success, within the field of STS studies, Bucchi & Neresini (2008) propose an interesting analysis of the ambivalent relations between new social movements and science and technology. On the one hand, S&T represent part of the enemy that social movements are fighting against, because they are seen as the cause of many environmental and health issues; or they are perceived as allies of the dominant powers. On the other hand, S&T are, for movements and committees, invaluable resources for internal organization and identity building. Just think for example of the contribution of the ICTs in facilitating the internal organization of the movements and of the committees[7] or of the role of scientific data and reports as sources through which these movements and committees give strength to their arguments.

It is widely recognized that the aversion of local committees to a project usually results in delays in its execution. Many scholars tried to show that if well managed, these conflicts may reveal important "lay" knowledge different from the traditional scientific knowledge and generate fruitful insights to improve the final decision both in terms of solutions adopted and social acceptability (Dear, 1992; Wynne, 1992; Della Porta & Piazza, 2008) suggest that local mobilization can be seen as an expression of active citizenship: through which citizens defend their rights and their communities against the invasion of outsider interests.

In the light of these facts, even if it is evident that the "dark" side of movements is the one that usually grabs the attention (especially with reference to the traditional media), I think that some distinctions are worth making when dealing with participatory experiences that take place outside of traditional institutions and without the intervention of traditional mediators (e.g. parties or unions). Treating the group as an indistinct whole restricts the development of any proposals generated within the group and strengthens the spiral of dissent and disillusion against the institutions, which are then accused of being incapable of listening.

The literature provides some interesting contributions to offer a positive interpretation of these phenomena. Raffini & Viviani (2011), for example, understand these phenomena as a return to politics that redefines the scenario we were used to in the last few decades. By referring to the present Italian context, the Authors speak of a "participatory and civic experimentalism" to refer to a new idea

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[7] This topic will be further developed in the next paragraph

of politics according to which bottom-up initiatives and networks of citizens and other collective actors play a central role and challenge the traditionally direct relationship between the leader and the masses.

This interpretation harks back to that of Pierre Rosanvallon in the book "Counter-democracy. Politics in an Age of Distrust" (2008). I found his approach quite interesting especially because it allows, in my opinion, us to read in a coherent manner not just the modalities through which the participation shows itself "offline", but also as far as the online dimension is concerned, as will be analyzed more in depth in the next chapter. The term "counter-democracy" comprises the set of activities that are not aimed at including the citizen in the exercise of power but at organizing the control over those who govern. These activities can take different forms, they can be more or less formalized, they can be performed by associations of citizens, by the press or even by individual citizens.

> By "counter-democracy" I mean not the opposite of democracy but rather a form of democracy that reinforces the usual electoral democracy as a kind of buttress, a democracy of indirect powers disseminated throughout society – in other words, a durable democracy of distrust, which complements the episodic democracy of the usual electoral-representative system. Thus counter-democracy is part of a larger system that also includes legal democratic institutions. It seeks to complement those institutions and extend their influence to shore them up (Rosanvallon, 2008, p.8).

Rosanvallon proposes therefore a positive reading of those facts which could appear like evidence of lack of trust towards the institutions. In the perspective he suggests, the ways in which this distrust shows itself does not necessarily mean hostility towards the democratic institutions but could be seen as a sort of control of society over its representatives, or in other words as a sort of *"negative sovereignty". Oversight, prevention, judgment* are fundamental so that a healthy democracy might be achieved. Under the label "oversight" (or surveillance) he includes the various means whereby citizens are able to monitor and publicize the behavior of elected and appointed rulers; the term "prevention" refers to citizens' capacity to mobilize resistance to specific policies, either before or after they have been selected, through strikes, protests etc.; lastly "judgment", sees citizens as judges and allows the intervention of the legal system to exercise the power of control (e.g. jury trials). Thus, in Rosanvallon's view, next to the recognition of legitimacy and the application of the representative procedures, forms of surveillance over the power placed outside of the institutions must be activated Rosanvallon.

Rosanvallon therefore distances himself from those who read in the contemporary age a fall in participation, considering instead that this activates itself according to non-conventional forms, which, as such, escape the traditional reading frameworks. Some of these non-conventional forms of participation have been made possible by the Internet. With reference to this, Rosanvallon argues

> In my view, however, the major role of the Internet lies elsewhere, namely, in its spontaneous adaptation to the functions of vigilance, denunciation, and evaluation. More than that, the Internet is the realized expression of these powers (Rosanvallon, 2008, p.70).

The next paragraph is devoted to better understanding the place of the Internet in the framework of public participation.

2.5. The Internet: a new space for public participation?

> The Internet and other personal digital media have been a large part of the story. But the importance of these new media in contesting power involves more than just their sheer existence as new communication tools. The political impacts of emerging technologies reflect the changing social, psychological, and economic conditions experienced by citizens who use them (Bennet, 2003, p.35).

I decided to start this paragraph with these words written by W. Lance Bennet because I think that they summarize very effectively the reasons why I could not avoid referring to the role of the Internet with regard to the implementation of public participation.

In an article of 2006, Thierry Vedel proposed dating the start of the enhancing of democracy through ICTs to the end of the Second World War and the advent of computers. He tried to trace back the origins of the present idea of e-democracy and thus identified three ages, each of them characterized by the centrality of a technology. The first goes up till the 1970s. This phase is characterized by the centrality of computers, that are mainly used to foster the efficient management of public administration. The State has a central role in setting policies. The second phase (1970-80) is dominated by cable television networks and private computers. It is characterized by the rise of new social movements and the idea that society would be better transformed from the bottom up. The structural constraints posed by cable TV, especially in terms of interactivity, limited the enlargement of the public space of politics. The last phase (1990-2000) is the one associated with the

term e-democracy. The Internet brought about a new way of communication and a new way to understand freedom of information.

By virtue of its intrinsic characteristics the internet has appeared, especially since the 1980s, as a potential solution to political deficiencies (Orr, 2007; Rosanvallon, 2008): it has been perceived as an opportunity to involve the citizenry in the political process, to restore the trust in the institutions and to grant a greater number of stakeholders fair access to the debate on goods and issues of shared interest (De Rosa, 2006; Bentivegna, 2004). Through this new tool the possibility to establish an "on-going democracy" (Rodotà, 2004), in which the interaction between the governed and the governors would be more fluid in time and space, appeared more feasible.

But which are these characteristics? I will present them according to three dimensions taken from Dahlgren (2009).

In terms of *structure*, the main advantages that the internet brings about are the removal of the spatial and temporal constraints and the possibility of using both synchronous and asynchronous forms of communication. These features expand the possibilities to interweave networks of contacts or relationships outside the everyday context.

In terms of *representation*, it is quite clear that internet-based tools represent a way which is potentially accessible to everybody, through which even those voices which were traditionally marginalized can be made heard and known to a wide public. Moreover, by enabling the potentially simultaneous presence of more actors to assemble than those that could be gathered together in a "real" context, the internet possibly makes the organization of traditional participatory methods, such as consensus conferences, easier and more cost-effective.

In terms of *interaction*, the internet offers a great variety of modes of communication (reciprocal interaction, individual reference-searching, group discussion, person/machine interaction…) and makes it possible to have at one's disposal different kinds of content (video, text, visual images, audio…) (Di Maggio et al., 2001), thus combining the advantages of broadcasting and those of narrowcasting (no limits to the number of participants and their interactions; possible circulation of a greater amount of information).

Literature on the contribution of ICTs to political inclusion shows that there are a number of important points that should be taken into account when dealing with this topic and that partly depend on the same opportunities just cited. If we maintain the Dahlgren categories, we can then for example see that, in terms of structural constraints, it is undeniable that the internet offers new opportunities for

public involvement but it is equally clear that the success of these opportunities depends on factors unrelated to the internet, factors which regard the subject of participation in the widest sense and depend also, for example, on the personal inclination to be actively involved in public affairs, or the context and the culture of reference (Orr, 2007).

Moreover, the availability of a wide amount of information does not automatically mean an increase in the interest in politics or in the common good:

> we can draw on what is already known about political participation and apply it to claims put forward in this debate. Web 2.0 is indeed offering some interesting alternatives for political engagement, but it doesn't, of itself, change the factors that motivate people to participate. Hence those who embrace Web 2.0 as a political tool will likely be those who are already engaged (Orr, 2007).

Free and easy access to the internet and the lack of spatial and temporal boundaries it implies represent at the same time opportunities to indefinitely widen the public sphere and threats for the deliberative processes and the fulfillment of the habermasian "institutions of the public sphere". In fact, the increase in the number of participants may negatively affect the quality of the political relationships that can occur between them, since the possibilities of real confrontation are reduced (Sebastiani, 2009). Another "structural" problem somehow related to the previous one concerns the possibility to verify the identities (see for example Dahlberg, 2001) of those who participate and the truthfulness of the contents displayed. These are essential elements to assess the reliability of what is said, to identify the hidden reasons behind the information presented and to be sure that the majority of the stakeholders has indeed been represented. Unfortunately, to keep them under control is anything but easy. Finally, the fact remains that for electronic practices to be set, especially in their more interactive appearance, the availability of a series of tools, like for example web-cams, wide-band internet connections and the skills to properly use them are essential. Again a problem of deprivation may occur.

In the context of the studies and researches on the internet, the idea of deprivation is usually associated to the concept of the digital divide. Actually, the digital divide represents a sort of obligatory passage point for the discussions on the uses of the internet. The digital divide is a problem that concerns both the structural and representational dimension. As the number of reports and researches on the topic clearly prove, the problem of Internet accessibility has not yet been solved and cannot be disregarded even when dealing with the theme of e-

participation (see for example Macaluso, 2007). It concerns the availability of infrastructure (broadband; fast internet connections…); the possession of e-skills; but also the still persistent unequal accessibility of the Internet according to gender, age and socio-economical status. To be precise about this point, the Istat [8]Report 2012 "Citizens and new technologies[9]" shows that with regard to the Italian situation, the gender gap in the use of the internet is tailing off, while the differences in the use of new technologies in general are still connected to the professional status.

According to the *interactional* dimension, some authors (as Schlosberg et al., 2005; Dahlberg, 2001) stress the fragmented nature of the Net that allows the co-existence of numerous and often mutually independent web pages based on similar issues and the presence of rules of power (hierarchies and gatekeepers) that catalyze/concentrate the attention especially on a small number of web sites. If in one sense this proves to be a great wealth of information, read from another perspective, the availability of many pages - or messages within a single page, in the case of blogs, forums, or social networks - focused on the same issue, together with the possibility to revise in real-time the contents put online may undermine the process of decision-making, stimulating a continuous rethinking of the definitions and programs on the basis of the clashing input which may, from time to time, be available (see Formenti, 2009). Moreover, the amount and variety of the information made available (text, images, videos, records…) makes having a systematic and coherent collection of information problematic (see for example Coleman & Gøtze, 2001).

If we move on to consider more specifically the contribution the internet gives to public participation, it is plain for all the world to see that in the last ten years, among the traditional forms of public inclusion, many internet-based participatory experiences have proliferated.

Mejier et al. (2009) draw up a list of the types of participation made possible by the use of the internet. The Authors group the different types of public participation under three main categories: political participation, policy participation and social participation. Under the label of *political participation* they include all the initiatives and actions aimed at influencing to some extent the selection and behavior of political decision-makers. These means: citizens pressure government to implement policies accurately; citizens support each other in issues related to

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[8] Italian national institute for statistics
[9] My translation of "Cittadini e nuove tecnologie"

government policies; citizens expose offenders of government regulation; citizens report offenders to government; citizens undermine the implementation of government policies. They call *policy participation*, the initiatives or the events directly aimed at influencing the implementation of a policy: citizens protest against a specific proposal or policy; citizens use a website to organize political action; citizens hold a plea for broad political changes; citizens discuss political issues within their own social networks; citizens discuss political issues in the public sphere; citizens provide assessment tools for voting decisions. The last category they identify, that they call *social participation*, distinguishes itself from the previous ones, because beside citizen-institutions relationships, it also includes the citizens-to-citizens ones. It thus comprises actions and initiatives aimed at strengthening the social capital within the community, that is the situations when: citizens maintain contacts with other citizens in the same area; citizens maintain network contacts within their social networks (bonding); citizens build networks of friend; citizens help each other through support of concrete advice; citizens exchange (digital) goods and service; citizens develop public goods together; and citizens form social networks in virtual word.

Commenting on these categories, the Authors observe that if it is undeniable that new opportunities for public participation have been created on the Internet, it should also be recognized that part of them are a replication of, and part of them are complementary to, offline practices. Therefore, they do not believe that the internet is in itself a medicine to treat the ills of modern society. The internet represents a new opportunity to strengthen democracy but social actors have to be able and willing to make the most of it. On the one side, the internet could benefit the institutions, helping them in the management of both the positive and the negative drives inside their communities; on the other side, it could benefit citizens, supporting social capital in society and giving them new ways to control and assess the actions of the institutions (Rosanvallon, 2008).

More recently, an increasing number of public administrations and governments have been using the internet to relate to their citizens. If we think about these top-down initiatives using, for the sake of simplicity, the scale proposed by Rowe and Frewer (2005) and described above, it comes out that, as many scholars pointed out (Formenti, 2009; Schlosberg et al., 2005) institutions around the world still use the Internet mainly to provide information to the citizens without offering real opportunities for interaction (*level of public communication*). At this stage, citizens are basically passive actors, being just given the possibility to find information and not to give feedback on it. The only possible case where the public has an active

role is when the information is given in response to a public request. Top-down participatory exercises appear then as mere strategies for disciplining civic energy, as ways to involve citizens not as co-decision-makers but as advisors for those who actually have the power to decide (Coleman and Blumler, 2009; Schlosberg et al., 2005; Formenti, 2005; Bentivegna, 2006), or as another means to promote institutional activities. As Orr (2007) observes, it is not uncommon that terms such as "participation", "deliberative democracy" or "deliberation" come to be used as misleading synonyms for communication. This does not mean, of course, that anything has happened according to the other two levels of public participation. In fact, on the one side, according to the Rowe and Frewer level of *public consultation* (see above), a number of e-consultation procedures (e.g. e-voting and notice-and-comment experiences; on-line surveys and interviews) have been used especially in the UK, in Australia, Canada, Sweden, Switzerland, United States and by supranational bodies such as the European Union and the OECD (Macaluso, 2007; Rocca, 2010). On the other side, some attempts have been made also according to the last, most involving rung of the ladder, that of *public participation*, through which citizens have been actively engaged in the definition of the decision-making process, its aims and topics by organizing, for example, internet-based Delphi methods, e-forums, chats and blogs (Macaluso, 2007).

But it is especially from the bottom-up perspective that the contribution of the internet seems to be expressed best. The nature of the internet - the easier and cheaper it makes to find information, to connect people and coordinate actions - has been well used by citizens and movements to share knowledge, make their points of view visible and mobilize to defend their rights, values, and interests. There are many examples today of protests and campaigns within which blogs, social networks, and forums are said to have played a major role especially in spreading information and creating and mobilizing networks (e.g. the Tunisian revolution or the Italian referenda on water, nuclear energy and legitimate impediment). Della Porta & Mosca (2005a), by analyzing two global protests (the anti-G 8 protest, that took place in Genoa in July 2001 and the European Social Forum (ESF), that took place in Florence in November 2002) identify how the internet has been integrated into the repertoire of action of social movements. They identify many functions it can fulfill or at least support. First of all, it is an additional resource to be used for organizational and logistics purposes (instrumental function). Thanks to it, for example, networking activities are facilitated, and it becomes easier for activists to make an issue visible beyond local and national borders. The internet is also a means of a "new repertoire of collective actions", since it can be used to express

dissent and protest in new ways (e.g. e-petitions; website defacement…). Third, it can play a symbolic function, to the extent that, for example, through discussions that take place in the various chat rooms, blogs, and forums, it allows the creation of shared interpretative models. Finally, it has a cognitive function, by promoting the circulation of information and the sensitization of public opinion, especially on issues ignored by the traditional media. Mosca (2011) citing Van Laer et al. (2010) underlines the distinction between modes of action "facilitated by the internet" and modes of action "based on the internet" in order to distinguish between those activities that are supported, facilitated or enhanced by the internet and those whose action is only possible through the internet. Anyway, also the modes of action based on the internet cannot be read without considering other factors, such as for example, the familiarity of its members (especially the central ones) with new technologies; their ability to handle and convey information; their ability to embed the issue into a layout appealing to the public in order to expand the consensus towards the movement while reducing the disagreement; the connections of the movement with other networks and in particular with the mainstream media (see for example Augusto Valeriani's analysis of the Arab Spring, 2011). Moreover, as happens for the off-line bottom-up participatory experiences, one of the main points that are widely raised when dealing with the topic of the internet's contribution to participation, concerns on the one hand, the disconnection these initiative and the networks that promote them from institutional politics and effective decision-making processes; and on the other, their sometimes elusive and ephemeral nature that makes them inaccessible for some members of the community (Coleman & Blumler, 1999).

The last topic I wish to address within this section is central when discussing the role of the internet in society and is highly debated in the literature. I am referring to how to link what is done online and what is done offline. If, in the first studies, offline and online were widely represented as two separated spheres involving different actors, different procedures, different outcomes, with progressive development of the internet and its penetration of daily life, the distinction between the two spheres has become less evident and processes of hybridization among social and political practices have occurred. We saw for example, as the online and the offline dimensions are daily intertwined in the organizational practices which happen daily within the social movements. Managing to understand the way in which the different arenas (online and offline) where the controversy takes place interact and what the effects which these have on public participation are, represents still one of the aspects which it is most difficult to manage, but at the

same time one of the most interesting with respect to the dynamics through which the concept of participation manifests itself in reality. In order to go more in depth into this aspect and given that, as the title of my thesis suggests, one of my aims is to try to give attention also to the non conventional aspects of the concept of participation, that is those aspects that are not (sufficiently) highlighted by the traditional approaches to the study of participation but that help to define a comprehensive picture of what this concept means in the practice. I believe that an interesting contribution in this direction could come from the application of some of the key concepts of the literature on techno-scientific controversies. Before going into detail about the approach I intend to apply I will try to give a general overview, in the next chapter, of the concept of techno-scientific controversy.

3

On techno-scientific controversies

3.1. The power of techno-scientific controversies

For a long time, the production of scientific knowledge and technology development has been delegated to the experts, and thus confined inside the scientific circles, whereas the identification of the policies has been delegated to the politicians. Within this framework before a technological object leaves the core–set, which is the group of experts more or less involved in its trials or theorization, it is given a shape as stable as possible. Therefore the public of the laymen is spared the possible uncertainties or troubles which instead keep tormenting the experts and the public debate turns out to be freed from uncertainties about the possible states of the world (Collins & Evans, 2002)

In such a worldview, controversies appear as a malfunctioning, a failure of the educational model, a consequence of the fact that

> the scientist or the politician did not want, or did not managed to be understood by the ordinary citizen. At best, the controversy appears as a waste of time, at worst it denotes a social pathology. It would be the proof of the irreconcilable conflict between expert and lay public, unable to hear each other. It would be a sterile opposition between the archaic and the modern (Lascoumes et al., 2002, p.70). [10]

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[10] My translation. "le savant ou le politique n'ont pas voulu, ou pas réussi à se faire comprendre du citoyen ordinaire. Au mieux, la controverse serait une perte de temps, au pire elle dénoterait une pathologie sociale. Elle serait le signe de rapports sociaux irréductiblement conflictuels, sourd à toute raison. Il s'agirait d'une opposition sterile où s'épuiseraient les archaïques et les modernes"

This view is in line with the reading of the relationship between science and citizens in terms of what has been called the "deficit of knowledge model", that sees the scientists as being invested with the job of educating the ignorant and emotional public (Bucchi, 2006), or more specifically for the case I studied, it is coherent with the interpretation of local resistance as an expression of the Nimby syndrome (see the previous chapter).

As mentioned in the introduction to the previous chapter, today, the increase of controversies and disputes in the field of science and technology and the environment proves that this model of "double delegation" is put to task and other social actors besides experts and politicians ask to have a say on the decisions that have to be taken. As Whatmore (2009) says about environmental sciences, one of these actors is the "lay public". According to Her view, controversies can therefore be read as

> those events in which the knowledge claims and technologies of environmental science, and the regulatory and policy practices of government agencies that they inform, become subject to public interrogation and dispute. Such events take many forms but arise when the rationales and reassurances of environmental science and policy fail to convince those affected by what is at issue – whose direct experience and/or knowledge of it contradicts prevailing expertise – or to allay their concerns (Whatmore, 2009, p.2)

Thus, controversies do not necessarily imply the presence of a fierce dispute but the persistence of a condition of shared uncertainty that challenges a pre-established order. At the same time, as Michel Callon (2006) points out, even if they open spaces for discussion, controversies do not necessarily entail more democracy, since their evolution necessarily implies some sort of exclusions:

> the existence of controversies does not necessarily mean democracy since controversies are above all sites from which some actors are excluded and sites where legitimate problems are imposed (Callon, 2006, p.153).[11]

Notwithstanding, there is a branch of research that argues that controversies may lead to a better articulation between science and society (Lascoumes et al. (2002); Callon et al. (2001); (Rip, 1986) Limoges (1993)) and to a re-articulation of the division of technoscientific labour.

According to Lascoumes (2002) we need to abandon the reductionist visions of science and politics, fossilized on the complaint of the uncontrollable power of

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[11] My translation.

expert knowledge and on the complaint of the lack of information and public debate on the impact of science and technology, and we need instead to start to see controversies as an opportunity to engage in a process of experimentation, which is both scientific and political.

Studying a controversy means shifting the attention from the study of accomplished facts or machines to the dynamics that occur before they acquire a final, fixed appearance. It means considering a scientific or technologic matter when it is not yet stabilized, closed or "black boxed" (Latour, 1998).

Studying a controversy means seeing scientific and technological facts as the product of a collective process: their definition and qualities depend on the transformations they undergo while they pass from one actor to another.

Controversies take place in "hybrid forums", public spaces (forums) where different kinds of social actors (hybrid) can discuss collective issues pertinent to different domains (hybrid). These spaces are thus characterized by:

a) *openness*, in the sense that they allow the mobilization and confrontation of different groups on the controversial issue. Interestingly, it may happen that some did not know each other before the rise of the controversy and that their identity is little by little revealed throughout it.

b) the involvement of a *variety of actors* (politicians, technicians, lay people…); and

c) the possibility that *different aspects of the issue may be problematized* at the same time, thus creating spaces for misunderstandings and conflicts (Callon et al., 2001)

A perspective of study that conceives controversies in these terms, is the so called Actor Network Theory (ANT). According to this framework, a controversy can be read as a set of dynamics of conflict and confrontation between networks of different entities (called actants), human, natural, material and symbolic acting on the basis of opposing action programs (Latour, 1998). A characterizing element of this approach is that it recognizes a general symmetry of power between the actants involved, but especially the idea of attributing an active role in determining the outcome of the dispute also to non-human entities (Latour, 1998, 2005; Callon, 1986). The processes of translation thus become central components in the articulation of the controversy: every time the controversial object passes through the various actants, it is liable to be modified, re-discussed, re-interpreted, re-shaped.

Translation refers to the set of operations by which statements are related not only with each other but also with material elements (substances, instruments,

techniques) and skills embodied in human beings, procedures or rules (Callon, 2006)[12].

According to the ANT approach, it is possible to identify four distinct phases, pursuant to which the network of actants that set up around the controversy take shape. The first stage is the *problematization*: the actor who intends to propose a technological solution, defines the problem(s) at stake, the solution(s), and the network of alliances designed to carry through its program of action. In the second phase (*interessment*), the alliances around the technological object are confirmed or redefined through different devices mainly based on dynamics of power or persuasion. The third phase, called *enrollment,* takes place when the actants, identified as components of the network, accept the roles assigned to them in the previous phase of problematization. Finally, *mobilization* takes place when the network is able to act and develop its program of action. The networks of alliances that are created in the context of a controversy are therefore temporary and unstable because of the heterogeneity of the actants involved and more specifically in consequence of the processes of translation that take place during the stages described above.

Consequently, studying a controversy requires paying attention both to the matter under discussion and to the different social actors involved in its definition. Each of these actors defends his/her interests, and in so doing positions himself/herself with respect to the other actors involved, in addition with respect to the artifact: he/she negotiates, opposes himself/herself, makes alliances in order to support or thwart the trajectory of development the subject is undertaking. In socio-technical controversies, the border between what is technical and what is social appears to be blurred, and the establishment of the object to be discussed in the public debate can vary over time (Callon et al., 2001). Moreover, our own experience of the state of the world is called into question and alliances among actors, practices, norms, policies are liable to new definitions. This situation can be fruitful in two ways.

It can facilitate the unfolding of the multiple dimensions that characterize an issue: focusing on the construction of facts allows us to get to the heart of the issues, to really understand the processes through which things go in one way rather than another, what the dynamics are, the actors, the main factors that make one particular trajectory salient rather than another. And this sounds invaluable in

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[12] My translation for "la traduction réfère à l'ensemble des operations par lesquelles des énoncés sont mis en relation non seulement les uns avec les autres, mais également avec des elements matériels (des substances, des instruments techniques), des competences incorporées dans des êtres humains , des procedures ou des régles"

the "era of complexity" in which we are living, when problems are less and less definable in a clear way since they usually involve (directly or as a consequence) many, sometimes disconnected, disciplinary areas - from ethics, to engineering, to politics, and so on.

It can also contribute to the identification of the heterogeneous network of actors that have a role in the shaping of a certain technical object. Even though controversies are usually reduced to the juxtaposition of two sides (advocates vs opponents; experts vs lay public), the situation is more complex and nothing is fixed once and for all. Thus, focusing on the controversy, allows us to shed light on the reasons at the base of the various arguments, it allows us to catch the shifts of the positions and interests at stake, asking for explanations directly from those involved.

A controversy comes to an end when the opposite forces have found a balance. This balance, however, leaves the dispute open, constantly mixing scientific, technical, political or economic considerations. In fact, studying a controversy requires us to accept that no result is definitive: what is certain at one time can become uncertain at a later moment and, vice versa, what now appears uncertain, may later acquire certainty. Moreover, something can appear clear and certain to one person, while being obscure and uncertain to someone else. The same definitions attributed to things may vary from one actor to another, from one category of actors to another. These things are true even inside the scientific community (Callon, 2006; Collins & Evans, 2002). Zones of ignorance and uncertainty constitute, as we have already said, the field where a controversy can develop (Callon, 2006). The process of negotiation of the different aspects of the issue and of the different positions of the actors can be read as a way of exploration of these zones of ignorance and uncertainty and it will be successful if a stable (not necessarily definitive) "coalition of project or cause" emerges (Lascoumes, 2002). This network involves human actors as well as arguments, evidence and facts (Rip, 1986). Moreover, the outcome of a controversy should not be taken as the achievement of a durable consensus but rather with the identification of the most robust option. Robustness does not rely on the individual attributes of those who support it, but it is proportional to the strength of the network which is formed around it (Limoges, 1993). In order to achieve the most robust solution, all the participants have to make their positions clear: the aptitude to hear the others' argumentations and the ability to argue one's own position, are basic pillars of good controversies. By virtue of this fact, when they are involved in a controversy, actors are stimulated to acquire more information and to refine their capacity to

argue. This means that the more the achieved solution is robust, the more difficult it will be to contest it, since this would imply the re-configuration of the heterogeneous network of arguments, social alignments and interests that produced it (Rip, 1986).

3.2. "Knowledge" and "expertise": an unfailing ingredient for a tasty controversy

A theme which emerges as central both from the analysis of the literature on controversies and from the models which were referred to in the chapter dedicated to public participation is that of knowledge.

Knowledge which can be seen as one of the products of the participative process; as assets exchanged in the interaction between the various actors; but also as a source of legitimation to participate, as an element which sanctions the admissibility of a point of view.

The theme of knowledge is then entwined with that of expertise. The actors involved in a controversy call in the experts so that, through the knowledge they have, they supply "scientific facts", to make their arguments beyond attack thanks to their objectivity. If this is true for the institutional positions, it is even more valid for the committees: the expertise plays for them a fundamental role, representing on the one hand the antidote to the "Nimby" diagnosis and therefore to their exclusion from the discussion as if they were motivated only by irrational arguments and, on the other hand, legitimizing their arguments, favoring the adhesion of more allies to their cause. In reality, the issue is far more complex. First of all, as we said earlier, the issues which today regard science and technology or, more, the environment, the impact and the extent of which it would be difficult to define in terms of time and space, together with the opportunities for information open by the new technologies, making problematic the traditional separation between the categories of expert and of lay public and more in general between science and society. Science and technology products are increasingly the outcome of heterogeneous and unstable networks made by experts, citizens, groups of interest, companies, media. (Bucchi, 2006; Latour, 1998; Callon et al., 2001). Moreover, the difficulty to deal with these complex issues affects the presumed neutrality and credibility of experts. Expert models are no longer able to give a firm, precise and prompt advice to those who ask for their intervention and in doing they create frustration and disappointment. Actually, as Bobbio (2010) observes,

experts find themselves entrapped in a kind of paradox: if they adhere to scientific evidences, they risk to be misunderstood, because it often happens that their results are not in line with the expectations of the other social actors, that they cannot firmly support or reject a position; on the other side, if they compromise themselves, by aligning themselves up with one position, they risk of not being believed.

Secondly, it is a matter of fact that today citizens have greater and easier access to information and data (See Chapter 2). On the one hand, this makes them more aware of what is happening and leads them to try to give voice to their views; but on the other hand it also increases their perceived uncertainty, since the available data are not always easily understandable and they are often contradictory.

Third, each of the parties involved can appeal to experts: the expertise must be countered with counter-expertise and this process can lead in the end to lose sight of the distinction between facts and values. As a consequence, instead of contributing to closing to some extent the boundaries of the discussion, making the issue, or at least part of it, a black-box (*process of politicization of the issue*), the intervention of expertise may exacerbate the terms of the debate, keeping the spaces for discussion open or even opening new ones (process of politicization of the issue). The experts lose their impartiality and become an integral part of the debate. Moreover, it can also happen that the terms of the discussion become connected to social imperatives, related to the idea of the common good. In this case, expertise is relegated to a back-stage role, asked to intervene only if the appeal to causes of higher interest is not sufficiently persuasive (*process of iperpoliticization*) (Pellizzoni, 2011).

Specifically, what usually occurs, as Bobbio (2010) pointed out, is a sort of paradox, according to which the social actors involved in the controversy try to get out from the impasse of politicisation asking the intervention of scientists, but the answers provided by the latter cannot settle the debate, thus they remain entangled in a continuous oscillation between the two poles of politicisation and depoliticisation.
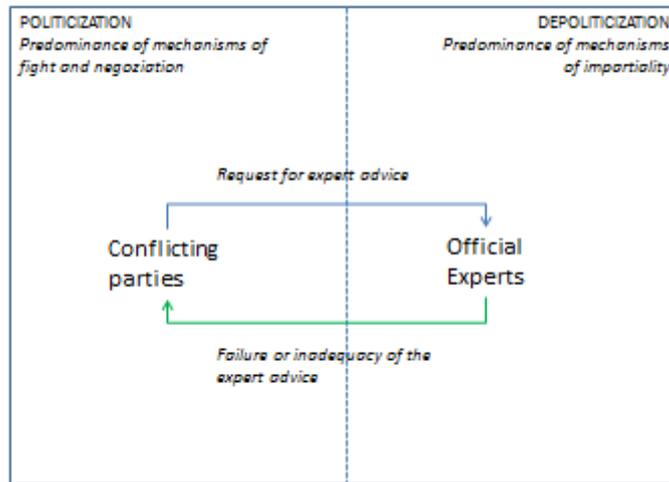
Figure 5 - The paradox of expertise.
Source: Bobbio (2010)

The concept of expertise does not exhaust itself in the figure of an expert, nor in the dimension of accredited knowledge. Expertise does not remain unchanged in the course of the dispute. For example, the knowledge deemed relevant in order to define the issue debated may vary in the course of the story according to the features of the issue that gradually assume salience.

A controversy is composed of both tacit and explicit forms of knowledge. The former come from experience, they are contextual, they are less visible and not easily recognizable, they are hardly measurable and not certified (Wynne, 1992). The latter are encoded through universally recognized schemata, they rest on data, they are certified. Not only can the public benefit from the knowledge spread by the experts, but the experts themselves can enrich their views with the other forms of knowledge activated by the controversy. The outcome of the meeting between tacit and explicit, lay and certified forms of expertise cannot be determined a priori: they can ignore each other, they can try to stand out one over the other, they can taint each other, they can produce new knowledge (Collins & Evans, 2002). Therefore expertise can be read as an ongoing (social) learning process in which the competing parties know and assess each other while discussing the issue at stake an its impacts that otherwise means, as Arie Rip (1986) puts it, that controversies can be seen as examples of Informal Technology Assessment.

Controversies constitute the best settings for observing the construction of social life (Venturini, 2010b) and become for this reason a precious element for participation.

As the presupposition of participation is, somehow, the recognition of diversity, the recognition that there is another point of view which has the right, deserves to be considered, the study of controversies as privileged places where the actors create and dissolve alliances, produce and spread knowledge, negotiate and shape identities and significance, but especially make salient their "worlds of relevance" (Limoges, 1993), that means their representations of what is at stake in a controversy, becomes a starting point to trigger the (social) learning process that is one of the aims of every participatory experience.

3.3. Conclusions

We have seen in the previous pages, how the term participation evokes a wide range of situations which could present themselves also in a joined form with respect to a specific issue or a problem of collective interest.

As we said, the studies and the research carried out so far on this issue, tended to take an exclusive approach, either top-down or bottom-up, or to concentrate themselves on single events, on single experiences of participation. The issue of e-participation itself was generally framed into one of the two approaches described above.

However, in my opinion, given that it is a far more complex phenomenon, participation should be read in a wider perspective. Furthermore, it must not be forgotten that nowadays several elements have occurred that are worth to be taken into account when analyzing participation. For example, as we saw in Chapter one, the internet is playing by now a role of the first importance in making it possible. In addition, there are many occasions, often set outside the official decisional arenas, where the "public vigilance on power" is performed and where issues of public interest and their impacts are discussed and assessed, but their being outside the official channels makes them marginal or invisible, whereas the socio-cognitive dynamics they involve would enrich the comprehension of the debated issue (De Vries, 2007; Rosanvallon, 2008). First, they contribute to the circulation of information and knowledge. Second, they force actors to act strategically and continuously reshape their arguments according to the ongoing assessments of the issue under discussion if they do not want to be pushed out of the stage when they

are involved in a controversy. More generally, these sites for "unconventional" participation, allow for an informal assessment of technology, distributed in time and space (Rip, 1986).

I thus propose a change of perspective and to see the controversies that arise about a topic as examples of actual participation. I will do it by investigating the empirical case of the Tav Venice-Trieste affair. More precisely, I propose to refer to the notion of "displacement" (Beck, 2000) in order to give visibility to the broad scene of participation and to account also for all the unconventional forms of participation. Translated into practice, the notion of displacement means to look at public participation using the controversial issue as a guide, as the point of departure for the collection and analysis of the data. In this way, the analysis has no longer at its core the participatory initiatives themselves but focuses on the topic about which participatory processes have possibly been activated (see Marres, 2005, Nahuis, 2011).

Public debate may be seen as taking place in set of arenas, where different actors compete in order to define the cognitive and normative content of a given problem. Each arena is ruled by its own grammar: the actors use a multiplicity of resources and employ a multiplicity of orders of justification (common goods, scientific facts, competitivity…) (Bonneuil et al., 2008).

According to Bauer (2004), public debate on an issue of a techno-scientific nature can be seen as the result of an interplay between media, public perception and regulation. Figure 6 shows in a brief manner the underlying dynamics. The circle in the middle represents the insiders of the field, the group of people that takes a stand on the issue at stake, either in favor or in opposition. This circle lies in the middle of a triangle which represents three elements that interact in some ways between themselves and with the circle: institutions (government and regulation), public opinion and the media. The base of the triangle is represented by the government that through regulation reassures the public that uncertainties are kept under a certain level of control; the left facet concerns public perception, that is public interest, involvement and attitude towards the field; while the right facet concerns the media, or more exactly, if we agree that for the majority of the "publics" the media are the first source of information, the climate they create around a topic. The upper (public opinion) and the lower (regulation or, more coherently with the case study analyzed, policy) part of the schema are both a process and an outcome. They can be observed in the above mentioned arenas as

speakers, media and audiences. Interdependent, they result from the activities of the involved social actors and meanwhile they influence those activities[13].
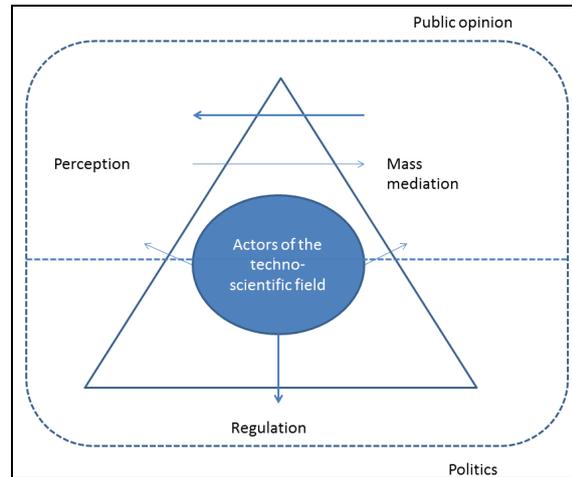
Figure 6 - Representation of the debate on a techno-scientific field

The media thus represent a privileged field of research for my purposes: they are an arena where actors and their statements, opinions, actions are made visible; where the issue itself and its different definitions can be made visible and in the end they also represent for the researcher a source of data which are relatively easy to access. They both mirror and contribute to the shaping of social issues and events (Nisbet et al., 2003)

The media are decisive in ensuring *visibility, salience* to the issues (Neveu, 1999). Using the media properly is, for the actors involved, a necessary condition in order to maintain the attention on the issue alive, since many problems compete to be at the center of the public sphere, but also to avoid that others take over the issue to manipulate it for their own interests. Today it is the scientific world itself that, differently from what happened in the past, when the direct relationship with the public was considered not necessary nor fruitful, it entrusts itself to the media, through which it tries to provide visibility to its activities and researches, in order to reinforce and legitimize its position in society (Bucchi, 2006).

Being the principal arena where the issues come to the attention of the decision makers, interest groups and the general public, the media accomplish an essential role for the *agenda-setting* processes (Nisbet et al., 2003)

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[13] An application of Bauer's model to a concrete case of technoscientific controversy, namely the one concerning nanotechnologies, can be found in Arnaldi (2011).

But the media have also an important role in influencing the processes of *framing,* that is the social construction of the meaning attributed to the issues (Shön & Rein, 1994). Better said, the media help to give meaning to an issue through those which Gamson and Modigliani (1989) call the "interpretative packages". At the core of these packages there is the frame, that is

> a central organizing idea for making sense of relevant events, suggesting what is at issue. […]. This frame typically implies a range of positions, rather than any single one, allowing for a degree if controversy among those who share a common frame. Finally a frame offers a number of different condensing symbols that suggest the core frame and positions in shorthand, making it possible to display the package as a whole with a deft metaphor, catchphrase or other symbolic device. (Gamson and Modigliani, 1989, p.3)

Dorothy Nelkin (2001) underlines how the media, and in the specific case she concentrates

on, the press, could become, for some actors, the main source of information about the events regarding science and technology:

> the media are brokers between science and the public, framing the social reality for their readers and shaping the public consciousness about science-related events. They are, for many readers, the only accessible source of information (p.205)

It is for these reasons that to accomplish the objectives of my research I chose to focus on some media arenas, one of which could only be the internet, given the relevance it gained in the last years, as highlighted in the second Chapter. In my research the different arenas are not considered following a hierarchy but as the pieces of a puzzle which only when considered as a whole is able to return an image of the issue which could reflect its real nuances and articulations.

The literature review showed that participation is a multidimensional concept. I thus selected four keywords that- I believe - evoke an essential trait to frame participation. These keywords will be the reference points to research on participation as it is in the Tav Venice-Trieste affair. First of all *will*, seen as, on the one side, proactivity, or the will to be included, to be part of, to contribute somehow to the definition of the issue; on the other side as the will to open the discussion to others, to share one's own knowledge and responsibility with others. But to come to life participation requires also a general predisposition of the context in which it happens to be ready for it, understanding and valorizing it. Thus, the will in itself is not enough. Also spaces (either physical or virtual) conveniently organized and instruments should be available to make participation

possible (*opportunity*). (see Rowe & Frewer criteria to assess participation, Chapter 2). Therefore *communication* is an essential component of participation On the one hand, communication means in my opinion considering information, knowledge, which represent at the same time prerequisites for participation, a circulating asset, through the experiences of participation for the different social actors involved, and one of the final results of participation. But communication means also paying attention to those which are the sources and the recipients of information, and also to the ways in which knowledge is produced and spread. And finally the last keyword is *heterogeneity* a term which summarizes the semantic richness of the concept of participation, the diversity of the forms through which it may occur, the diversity of the actors who are involved, the diversity of their "worlds of relevance"

The translation into practice of my approach will be the subject of the next chapter.

4

Case study and methodology

4.1. The "Tav Venice-Trieste" affair. A brief introduction

Figure 7 - The Corridor V. Map
Source: Il Sole 24 ore

Figure 8 - The area subject which is subject to the Tav Venice-Trieste construction
Source: La Nuova di Venezia

The decision to focus on the construction of the high speed line between Venice and Trieste stems from a number of considerations:

- It represents a current debate, in fact, although started in 2005, it has been back in the spotlight over the last two years. It thus represents an opportunity to really follow something while it is taking shape

- It has not been very much studied so far, since in Italy, public debate on these kinds of infrastructure projects has been dominated by the railway line between Turin-Lyon, where an important conflict, with sometimes violent clashes between the institutions and the local committees took place. This affair has been emblematic and gave a lot of insights also to the academy where research and studies have been most active (see for example, Della Porta & Piazza. 2008; Padovan et al., 2011; Padovan & Magnano, 2011; Bobbio & Dansero, 2008).

- It involves different territorial levels and, therefore, it possibly involves a fairly large use of the Internet (at least to accomplish the functions related to coordination of actors and spreading of information):
  - it is part of the Trans-European Transport Network TEN-T programme[14], one of the most important means of infrastructure

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[14] Since 1990, the Italian Government together with the company that manages the national railway network (RFI) carry out the high speed railway project (Trans-European Networks – Transport (TEN-T) project) in

funding and of the the Pan-European Transport Corridor V (Venice -
Trieste/Koper - Ljubljana - Maribor - Budapest - Uzhhorod - Lviv –
Kiev);

- It is part of the Pan-European Corridors project, Railway Axis 6
  "Lyon-Trieste-Divača/Koper-Divača-Ljubljana-Budapest-Ukrainian
  border ", a project which concerns the routes that link the major
  cities and major ports of Eastern and Central Europe.
- It is a strategic project at the national level;
- Its route involves two different Regions (Veneto and Friuli Venezia
  Giulia) thus requiring them to coordinate strategies and visions of
  development; it involves 40 municipalities, [15]each one characterized
  by its own different economy (mainly based on tourism and
  agriculture)

- Since it is a quite complex project both with reference to its more technical
  aspects and to the political and economic dynamics it involves, it possibly
  involves different types of expertise.

While the Friuli Venezia Giulia Region has maintained the original railway
route, according to which the railway runs parallel to the highway, the Veneto
Region has gone through a different route hypothesis. The very first hypothesis was
to let the high speed railway run parallel to the highway, as in Friuli Venezia
Giulia. The second hypothesis, called "the coastal route", ran lower than the
previous one, and was thought of as serving also the seaside towns. For this reason
it included several stations between Venice and Trieste and has been hotly debated
since it appeared also to be in contrast with the European Community idea of a
high speed railway. The third hypothesis implied the quadrupling of the existent

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Italy. These transport networks have been outlined by the European Union in the '80s. TEN-Ts are part of a
wider system of "trans-European networks" (TEN), in addition to transport networks, also include the "trans-
European telecommunications networks" (eTEN) and "trans energy networks -European "(TEN-E).
[15] The municipalities involved by the high speed railway Venice-Trieste are:
- *Province of Venice*: Venezia, Marcon, Quarto d'Altino, Meolo, Musile di Piave, San Donà di Piave,
  San Stino di Livenza, Annone Veneto, Portogruaro, Gruaro, Fossalta di Portogruaro, Teglio Veneto,
  San Michele al Tagliamento
- *Province of Treviso*: Roncade, Mogliano Veneto
- *Province of Udine*: Ronchis, Palazzolo dello Stella, Teor, Pocenia, Muzzana del Turgnano, Carlino,
  Castions di Strada, Gonars, Porpetto, San Giorgio di Nogaro, Palmanova, Torviscosa, Bagnaria Arsa,
  Cervignano del Friuli, Villa Vicentina, Ruda
- *Province of Gorizia*: Turriaco, San Canzian d'Isonzo, Ronchi dei Legionari, Staranzano, Monfalcone,
  Doberdò del Lago
- *Province of Trieste:* Sgonico, Duino Aurisina, Trieste

tracks and the last one, that has only appeared in the last few months concerns a further use of the existent line.

A brief history of the main events is presented in the following table.

Tab. 1 – Tav Venice-Trieste. History of events

1990s	The Committee for the promotion of the high speed railway for freight and passenger trains on the line west-east Lyon-Turin-Milan/Genoa-Venice-Trieste-Lubljiana (Comitato Prom--motore dell'alta velocità ferroviaria merci e passeggeri sulla direttrice ovest-est Lione-Torino-Milano/Genova-Venezia-Trieste-Lubiana) is founded at the behest of the industrialist Umberto Agnelli and the President of the Regional Council of the Piedmont Region,Vittorio Beltrami. On 23 March 1998 the name of the Committee is changed to "Promoting Committee for the European High capacity Railway for goods and passengers, Lyon-Turin-Milan/Genoa-Venice-Trieste-Lubljiana, Transpadana" (Comitato Promotore della Direttrice Ferroviaria Europea ad Alta capacità Merci e Passeggeri, Lione-Torino-Milano/Genova-Venezia-Trieste-Lubiana, Transpadana)
June 2003	Presentation of the preliminary draft of the Ronchi-Trieste line by RFI[16] to the Friuli Venezia Giulia Region and the dedicated Ministries (Ministry of Infrastructure and Transport, Ministry of Environment, Ministry of Culture).
September 2004	The Friuli Venezia Giulia Region expresses its positive opinion on the Ronchi-Trieste line project but attaches some further requirements. RFI redefines the project according to the requirements.
September 2005	The project is rejected by the Commission for Environmental Impact Assessment.
July 2006	The Veneto Region approves a deliberation in which the idea of a line that runs parallel to the highway is questioned and formally asks RFI for a new line.
October 2006	The Friuli Venezia Giulia Region funds a "technical

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[16] Italian railway company

	committee" in order to "agree" changes in the line
May 2007	The Veneto Region addresses more requirements to RFI concerning the new line
June 2007	The section Ronchi-Trieste is recognized as a public infrastructure project by the so-called "Legge Obiettivo" (Law 443/001) – its construction should start by the end of 2012
August 2007	The No Tav Committees from Friuli Venezia Giulia submit a petition to the European Commission denouncing the non-involvement of the population in the definition of the project, the lack of clear information on the project and some discrepancies (mainly negative environmental impacts and lack of cost-effectiveness analysis) of the project
November 2007	The European Commission assigns a contribution of 24 Million Euros, to fund studies on the high speed railway section Trieste- Ronchi South for the period 2007-2013,
February 2008	The Technical Committee established by the Friuli Venezia Giulia Region ends its work with an Agreement on the line, concerning the part between the rivers Isonzo and Tagliamento. The Agreement is signed by the Municipalities of Bagnaria Arsa, Castions di Strada, Cervignano del Friuli, Fiumicello, Gonars, Muzzana del Turgnano, Palazzolo dello Stella, Palmanova, Pocenia, Ronchi, Ruda, San Giorgio di Nogaro, Teor and Torviscosa. The European Commission judges the petition sent by the No Tav Committees from Friuli Venezia Giulia to be admissible
June 2008	The European Commission expresses itself on the No Tav Friuli Venezia Giulia petition. Since the procedure of approval of the project is still ongoing and according to the documents received, the Commission does not identify any violation of the Communitarian Law, it is not possible for them to undertake any other initiative
December 2008	Antonio Tajani, Vice-President of the Commission responsible for transport, signed 11 agreements for the trans-European transport network (TEN-T) for the period 2007-2013. The decisions concern important railway works in Italy,

	Austria, France, Germany, Slovenia and Hungary.
October 2009	The Friuli Venezia Giulia Region and the Veneto Region engage with the European Union (which allocates € 4 million for the railway line project) to find a common solution and conclude the preliminary project by the end of December 2010.
September 2010	The Interministerial Committee for Economic Planning (CIPE) approve the update of the Agreement between RFI and the Ministry of Infrastructure.
October 2010	The Friuli Venezia Giulia and Veneto Regions fix their position on the high speed railway construction between Venice and Trieste. From Mestre to Portogruaro the line will follow so called "coastal" route, from Portogruaro to Ronchi it will run parallel to the highway.
December 2010	The Italian company for Railway Network (RFI) presents the Veneto and Friuli Venezia Giulia Regions the preliminary project and the studies on the environmental impacts of the line of the high speed/capacity railway from Venice to Trieste. The rail line is divided into four sections: Mestre – M.Polo Airport; M.Polo Airport – Portogruaro; Portogruaro – Ronchi and Ronchi – Trieste.
January 2011	WWF Friuli Venezia Giulia sends a series of complaints to the Ministry of the Environment. It is requested that the four projects presented separately in December by the Italian Company for the Railway Network (RFI) be merged into a single preliminary draft and then subjected to a single all-inclusive Environmental Impact Assessment (EIA)
May 2011	The Committee TAV Venice-Trieste; together with the associations: Movimento 5 Stelle San Donà di Piave; Associazione Naturalistica Sandonatese; and WWF Veneto Orientale; sends a petition to the European Commission about the construction of the new high speed/high capacity railway Venice-Ronchi (TS). The text of the petition summarizes the concerns expressed by some citizens from the Veneto Region, from the No Tav local committees and some associations who have signed the letter. The Committees ask for more involvement in the decision-making processes, support

	enhancement of the existent line, ask for stopping the European funding to the rail line construction and highlight the damages caused in other areas where high speed railway lines have already been built. The petition was signed by about 3,000 citizens from the Veneto Region.
	Legambiente Veneto, the Italian League for Bird Protection (LIPU), Italian League for Bird Protection; "L'altra Tav" Committee (which gathers together the Legambiente association "Pascutto-Geretto", the Venetian Confederation of the agricultural producers, the Italian Confederation of Farmers of the province of Venice and the Confagricoltura confederation of Venice) send a petition to the European Court of Human rights and to the Regional Administrative Tribunal of the Veneto Region. The petition concerns the "coastal" route of the rail line and is against the Veneto Region, Ministry of environment and the Italian Company for the railway Network. The contested elements concern the project itself and in particular its environmental impacts and the fact that the project has been nominated for the first time within a point of order.
	The Ministry of the Environment accepts the requirements made by WWF Friuli Venezia Giulia and asks RFI to gather all the sections of the railway into a single project
June 2011	The Government appoints the architect Bortolo Mainardi Special Commissioner for the high speed/high capacity railway Venice-Trieste
October 2011	RFI together with the Special Commissioner for the high speed/high capacity railway Venice-Trieste start to plan a new layout for the Veneto Region, based on the quadrupling of the existing tracks
November 2011	The European Commission admits the petition sent by the No Tav Committee for the high speed railway Venice-Trieste
January 2012	The European Court of Human Rights confirms the eligibility of the petition submitted by Legambiente Veneto, the Italian League for Bird Protection (LIPU), Italian League for Bird Protection; "L'altra Tav" Committee.

February 2012	During a meeting at the headquarters of the Province of Venice the Special Commissioner considers the issues raised by the Province of Venice, the Veneto Region and a number of municipalities involved in the high speed railway construction with respect to the "coastal" route and in particular on the section Airport M. Polo-Portogruaro. He then adds that in October 2011 he started a feasibility study to determine the possible alternatives to this layout, with particular reference to the possibility of quadrupling the existing railway line
April 2012	The Special Commissioner convenes a meeting at the headquarters of the Province of Venice with all the Municipalities involved in order to set up a process of evaluation between two possible line: the one that runs parallel to the highway and the one that envisages the quadrupling of the existing line
June 2012	With a public notice published in the newspapers "Il Sole 24 Ore", "Il Piccolo" and "Il Gazzettino" the process of Environmental Impact Assessment (EIA) on the preliminary draft of the work of new high speed/high capacity Venice-Trieste route begins. The line will be assessed as a whole and no more divided into lines as has happened till this moment. Observations should be sent by August 19, 2012 (60 days).
October 2012	A new, cheaper version for the rail line comes to the fore. Illustrated by the Special Commissioner to the Presidents of Confindustria Veneto and Confindustria Friuli Venezia Giulia, it won't consist any longer in the quadrupling of the existent tracks but on a more substantial exploitation of the existing line, currently used at only 40% of its capacity.

4.2. The toolbox: research design and some methodological issues

The big problem that I faced in organizing the empirical work was to find an approach that would have allowed me to take a broad look at public participation, that would have allowed me to capture any different forms that public participation can take in the case of a controversy, and in this case, as we said, a case of techno-scientific controversy. A further complicating factor has been the inclusion of the online sphere as a possible arena, or better, set of arenas, in which forms of participation can be activated.

The premises from which I moved are twofold: the first is that one of the purposes of participation in the context of a techno-scientific controversy is the definition of the controversial object at stake. Having this in mind, I felt that adopting individually a top-down or bottom-up approach to participation, I would not have been able to give an account of the variety and richness of situations that can occur in the reality of a controversy, some of which, while escaping from the conventional schemes, deserve to be valued as they contribute to some extent to this process of issue-definition.

The second premise is that the set of different arenas (online and offline) in which the controversial issue assumes significance or is debated is somehow interconnected and that, in order to show how public participation effectively translates, in the context of techno scientific controversy, it is relevant to identify and endorse these connections.

A possible and effective solution to these dilemmas appeared to be a shift on the focus of the study, that is to say abandoning the idea of focusing on the concept of participation itself and on the actual practices that may or may not be realized in practice and put at the center the object of the controversy, seeing how it defines participation. It means in the words of Nortje Marres (2007), one of the scholars that is actively contributing to the translation of this method in practice:

> Treating public involvement in politics as a practice that is occasioned by issues and dedicated to their articulation (Marres, 2007, p.17).

I thus identified those that could be the main settings in which the issue was defined and I used them as a source of data as well as a dimension to be explored in itself. I decided to focus my analysis on media arenas as privileged settings where

the issue is made salient, as tools to influence the agenda-setting, as instruments in the hands of the various actors involved in the dispute to expose their arguments and to appeal to different audiences. In short, media as spaces where process of joint shaping of knowledge and identities can take place and where individual identities and ideas of common good can be reassembled under a common project (Callon, 2003).

Thus the sources of my data were the Internet, a social network (specifically two Facebook groups) and a daily local newspaper. In addition, in order to further detail the picture thus obtained, I made some semi-structured interviews with some of those who turned out to be key actors involved in the dispute, according to my readings and the data collected from time to time. Before going ahead with the illustration of the methodological framework I applied, I should specify more in detail the reasons behind the choice of each data source and the ways I approached them.

4.3. Data sources

4.3.1. The internet

As the many studies cited in the literature review have shown, the internet is being used for information purposes; it is fulfilling important functions of communication, between citizens but also between governments and citizens, and experts and citizens; it acts as a showcase for the publicization of contents and points of view (Rogers et al., 2002); it may be an instrument to accomplish the processes of *interessment* and *enrollment* (see Della Porta & Mosca, 2005a), it can also offer new possibilities to revisit the same practices for making the decisional processes more inclusive (Macaluso, 2007). It would therefore be pointless, in a context like the one just described, to not take into account the dynamics that characterize the online sphere and which may have an effect on participation. It should then be said that all the aspects mentioned just above are unlikely to emerge if we consider, as it often happens, the Internet-based settings for discussion, individually (see Rogers et al. 2002; Marres et al., 2008), but also, I would add, if we considered the internet and the practices that go on through it separately from traditional media and the set of activities that take place offline.

Thus, it should be said that there are essentially two ways to approach the study of the internet within social research (Rogers, 2010; Marres, 2012). The first one,

"digitized methods" has dominated since the advent of the internet and consists of an adaptation of the traditional research methods to the characteristics of the new medium. According to the perspective of digitized methods, the internet is essentially an object of study and the data gathered through it have to be grounded offline in order to acquire a sense. The second, developed by Richard Rogers and his research group, has been called "digital media" and considers the internet

> not only an object of study, but also a source (Rogers, 2009, p.8).

These scholars claim a shift in the kinds of questions to pose in the study of the internet and try to let the medium speak, through its own language (tags, links, ranks, etc.):

> the issue no longer is how much of society and culture is online, but rather how to diagnose cultural change and societal conditions using the Internet (Rogers, 2009, p.8).

According to this second perspective of study, the relationship between the Web and the ground is re-defined in terms of an *"online groundedness"*:

> For the third era of Internet research, the digital methods program introduces the term online groundedness, in an effort to conceptualize research which follows the medium, captures its dynamics, and makes grounded claims about cultural and societal change (Rogers, 2009, p.8).

Translated into practice, this means giving importance to the ways the media are constructed and include in the analysis their ontological objects (e.g. links, tags). For example, it means recognizing and taking into account the fact that the hierarchies of the Web are mainly based on recommendation systems, that is information filtering systems that seek to predict the "preference" or "feedback" that a user would give to an item. Many "digital tools" have been created in order to perform this kind of analysis. A leading role in the development of these tools has been played by the Digital Methods Initiative[17] and Macospol[18]. Moreover, much research has been conducted till now, in which scholars have applied these

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[17] "The Digital Methods Initiative (DMI) is a collaboration of the New Media TEMLab, University of Amsterdam and the Govcom.org Foundation, Amsterdam, with founding support from the Mondriaan Foundation. It is a New Media PhD (training) program as well as a New Media research group in Media Studies, University of Amsterdam". (see https://www.digitalmethods.net)

[18] "Macospol (Mapping Controversies on Science for Politics) is a joint research enterprise that gathers scholars in science, technology and society across Europe. Its goal is to devise a collaborative platform to help students, professionals and citizens in mapping out scientific and technical controversies" (see http://www.mappingcontroversies.net/Home/AboutMacospol)

tools thus exploring the internet basically using the issue they were investigating as the driver of their data gathering (e.g. Marres, 2005; Rogers, 2002; Rogers et al., 2010; Nahuis, 2011; Venturini, 2010a).

This is therefore the approach that I tried to apply to the case study. It should be said that not all the aforementioned tools for internet exploration are suitable for the study of all the cases. The pertinence of a method depends on the issue that is being investigated and also on the kind of context related to the issue. Better said, it depends on the features of the issue concerned: its saliency on the Internet, the extent to which it is discussed through the Internet. But it also depends on the uses that the actors involved made of the Internet, that means above all, the extent to which they best make use of the internet tools to convey contents.

I was able to apply two tools to my case study: Touch Graph Seo Browser and Navicrawler. In particular, the data collection developed as follows. First, I entered the keywords "Tav Venezia Trieste" in the Google search engine and I looked at the related searches, in order to identify the most typed entries related to that particular high speed railway. In this way I could have an idea of the aspects of the HSR people do research on via the Internet. Five entries came out:

- "no tav venezia Trieste";
- "tracciato tav venezia Trieste;
- "tav venezia infrastrutture";
- "mappa tav";
- "tav più".;

In order to explore connections between related websites I used Touchgraph Seo Browser. As the website (http://www.touchgraph.com/seo#instructions) suggests

> TouchGraph SEO Browser reveals the network of connectivity between websites, as reported by Google's database of related sites

Once a keyword has been entered, Touchgraph Seo Browser identifies the top 16 results from Google for that specific search (but only the first 10 are then visualized), by using a Google API (Application Programming Interface) based on the Google indexing criteria. The keyword I used is once again "tav Venezia Trieste". After the resultant map had been shown, I added to this first quest 3 more quests based on the "related searches" I got from the Google search engine. For the sake of clarity, I decided to consider only the ones containing geographically relevant information, that is all but "Tav più" and "mappa tav"). In this way I got a graph with the websites that speak about the high speed railway according to the

users' interest. The resultant graph shows the website that the Google search engine considers most relevant according to queries that the users usually associate with the high speed railway affair, that means in other words, the most typed queries when searching for information about it online, through Google.

Figure 9. – Touch Graph Seo start page

In order to know more in detail what kind of information about the HSR was present on the internet, I used a Firefox add-on[19], called Navicrawler. The way it work stems from the theory of aggregates and claims that the documents about the same issue have a greater chance of being connected links. Thank to this software, it is possible to scan the contents of the web through a web-browser. It lies at the crossroads between browsing and crawling. The focus of the analysis is the issue itself, and the elements that become central in the analysis are the links and hyperlinks: the presence or absence of a link and the reciprocity of this link is symptomatic of the alliances that contribute to the development of an issue. The software involves a semi-automatic procedure that, unlike automatic crawling, allows the researcher to see the context of links and intervene in the mapping. In this way Navicrawler works by scraping the out-links of the visited websites (listed and stored as "Next Sites"). For each website, the researcher can decide to incorporate it into the corpus (it becomes "In Site") or reject it ("Out Site"). Labels can also be added to each site to better describe its content and to allow later

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[19] An add-on is a piece of software that enhances and customizes the applications based on the Firefox Web Browser (Mozilla)

filtered visualizations. At the end, the corpus can be exported and visualized as a graph in which the nodes represent the websites and the edges stand for the links between them. More precisely, by using Navicrawler, a map has been created of the main sites that dedicate a section fixed to the Tav question. The starting point is the site Notavveneziatrieste.tk, which is the first site that appears when entering the keywords "Tav Venezia-Trieste" in the Google search engine. I then went on surfing the sites that Navicrawler identified as "next sites", that is the out-links of the sites I had visited until the proposed sites appeared not too "distant" from the topic of research, that is when they no longer mentioned the high speed railway. The discriminating factor through which a site had to be included in the map or not, was whether it contained a permanent section, or at least a permanent reference (e.g the "No Tav" logo) to the high speed railway affair. The map thus obtained can be considered a plausible representation of how the issue is dealt with on the Net.
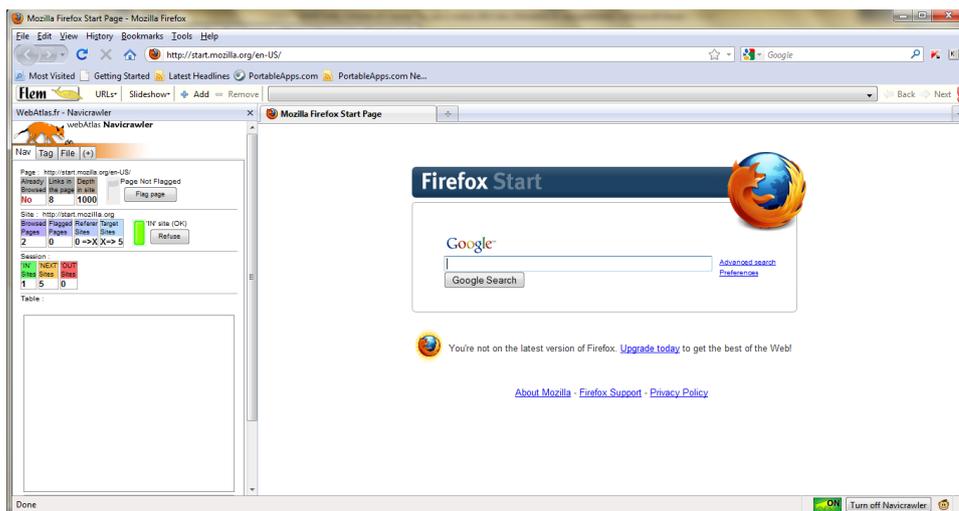
Figure 10 - Navicrawler start page

4.3.2. Facebook

The great importance that has been and still is given to the world of social networks sites (SNSs) is pretty self-evident (boyd et al. 2007). Besides the fact that they are more and more pervasive in daily life, there are now many studies and researches dedicated to going in depth of functioning (e.g the type of contents they deliver, or the kinds of audiences they attract; see for example, Hansen et al. 2011; Marwik et al. 2010) and to the impacts they bring about on the social dynamics (see for example Ellison et al., 2007).

Among the major SNSs I decided to focus on Facebook because, when I started to study the Venice-Trieste high speed railway affair it was the one which turned out to be the most used among the actors involved. Searching for the keyword "Tav Venezia-Trieste" on Twitter (through the Twitter Scraper tool[20]) gave only few results, while entering the same keyword on Facebook it was possible to see more intense activity. This trend emerged also in the talks I had with the interviewees: they seemed more likely to use Facebook than Twitter, adding in some cases, that they found Facebook most suited to their purposes and their habits of using the Internet.

Many studies have explored Facebook's contribution to the mobilization of social movements, emphasizing the aptitude of the medium to strengthen some of the key strategies of the movements, such as the activity of "bridging" and the expansion of the network, mainly made of weak ties, the dissemination of information, the provision of greater visibility to the movement and to the issue on which it develops (see Valeriani, 2011; Farinosi & Treré, 2010; Farinosi, 2011; Cioni et al., 2010). In 2012, Facebook users represent nearly 70% of those who have access to the internet (vs 49% in the previous year), that means 41,3% of the Italian population and 79,7% of the young (Censis, 2012). Socialbakers.com, a social networking statistics site shows that Facebook penetration in Italy is 38.17% compared to the country's population and 70,86% in relation to number of internet users. The total number of Facebook users in Italy is reaching 23,031,960 and grew by more than 1,333,460 in the last 6 months. According to their data, the largest Italian age group registered on Facebook is currently 25-34 with a total of 5,853,000 users, followed by the users in the age of 18-24.

At present, Facebook represents probably the most problematic setting to be investigated through the digital methods. There are at least two reasons for this. Even though some attempts have been made to develop tools to speed up and make the data collection easier (see i.e. Shah et al., 2011), for social researchers this operation is still, in many cases, a long process, to be done manually. The SNS changes its APIs and its data access guidelines frequently making it difficult to develop digital tools able to support automatic processes of data collection. Second, but related to the previous point, since the data gathering is very complicated, at present there is not a consolidated methodology to properly analyze those data.

I decided to perform my analysis on two groups against the construction of the high speed railway, namely the group "No tav Basso Piave" and the group "No tav

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[20] https://tools.issuecrawler.net/beta/twitterScraper/

FVG". I selected them because they have a wider territorial reference, covering the majority of the area affected by the railway construction. By referring to a territorial extension wider than the municipal one, they can be considered as plausible representatives of what happens in the areas concerned. I got confirmation of this fact also from the activists that I interviewed. In the beginning I was willing to include in the analysis also the Facebook group "Sì Tav Venezia-Trieste" but when I tried to contact them, I had no reply. I thus decided not to consider the group because It was important for me also to have the opportunity to have further feedback on the ways Facebook is used through the interviews.

Last January, when I gathered the data, the group "No Tav Basso Piave" had 431 members and 7 group administrators. The group position is described as follows:

> "To build a HSR in the Eastern Veneto means to destroy our territory with tremendous hydrogeological risks. We should undergo all this for a top-down political choice taken without consulting the citizens, taken without listening to those people that live on that territory and know it better and whose lives will certainly be upset by the passage of the HSR. Moreover, they want us to accept it without giving fixed data and information, but by surrounding it in secrecy. We say no to the construction of the HSR because:
>
> - it is publicly funded;
>
> - it means only disadvantages;
>
> - no freight trains will use it;
>
> - commuters do not need it;
>
> - a drained land does not allow the construction of further rails or flyovers."

I gathered the data from the group "No Tav FVG" in March and there were 736 members, and among them there were 17 group administrators. The group description declares:

> This is a group promoted by the newly constituted "Committee No Tav Friuli Venezia Giulia" to inform the citizens on what is happening in our territory according to the construction of the HS railway and the high capacity railway (high capacity railway: pay attention to the word pun!). We will publish films, news footage, meetings, reports, collaborations and, of course, the group activities. We hope the group will grow up and be close-knit. "No Tav" Committees are more active than ever!

The analysis of the two groups has been carried out in two ways. First, since the territorial scale is a large component of this controversy, I decided to investigate more in detail the internal composition of the Facebook groups. For this, I used the Facebook application Netvizz, created by Bernard Rieder, which allows one to create graphs from the friendship relations of either one's own personal network of Facebook friendships or groups one is a member of. After having gathered the data, a software for data visualization is needed to convert the information into an understandable format. I used Gephi, a free, open-source interactive software, developed by the Gephi Consortium, a French non-profit company, for visualizing, exploring and understanding graphs. When I gathered the data through Netvizz (may 2012) the "No Tav Basso Piave Group" included 435 members and 2,210 edges,while the "No Tav FVG group" included 791 members and 15,143 edges. I thus organized the various nodes (members) (in terms of color, dimension, position) in the graph according to 3 criteria:

- *Degree,* that means the number of connections each node owns;
- *Betweenness centrality metrics*, which is a measure of the node's influence in the network showing how often it appears on the shortest path between any two randomly selected nodes in the network. A high measure of betweenness centrality means that the node is responsible for connecting disparate groups in the network together and thus can be considered as exerting higher influence on the overall structure;
- *Modularity class*, an algorithm that allows one to detect the communities present in the group. Through this measure it is possible to identify the clusters of nodes that are more densely connected together than with the rest of the network.

The graphs I obtained, and that I present later, will thus give an idea of the territorial distribution of the groups' members. This can tell us something which can help us to understand where, geographically speaking, the issue "Tav" is most discussed; if there is a sort of "hierarchy" between the various rail lines, that means that one is more debated than the others; who are the most influential nodes and thus presumably the central ones in conveying information; and whether or not these nodes are directly involved in the case concerning the Venice-Trieste line.

Beside the use of Netvizz, there are no openly accessible digital tools to perform Facebook data collection and analysis at present, so I did a traditional manual

content analysis on the posts. I identified in the text of the post (link included) my collection unit. I recorded the number of likes and comments of each post, that can be considered as specific options of the medium, through which the salience of the posted content and the degree of agreement/disagreement generated by it can be measured. In addition, for each analyzed post I recorded: a) its topic: if it was about aspects closely related to the high speed railway project (technical details, political, etc...); if it concerned aspects of a protest or event related to the high speed railway; if it presented aspects concerning the functioning of Facebook or aspects related to the No Tav Committee; b) the actors possibly cited in the post, according to their affiliation c) the high speed railway line which the content of the post referred to.

4.3.3. Daily local press

Although the 10th Censis/Ucsi Report on Communication in Italy (2012) shows a decrease in the reading of hardcopy newspapers (in 2008 they were read by 67% of the Italians, that has gone up to 45,5% today) especially within the youngest group, I decided to dedicate part of my analysis to the study of the articles appeared in the local newspaper "Il Gazzettino". The daily press has been until now one of the main sources of data for research on the communication of science, being a privileged and easy-to-access space where the narratives, representations and frames that contribute to the construction of the meaning of a controversial object are made salient (Gamson & Modigliani, 1989; Alietti & Arrobbio, 2011).

The newspaper I worked on, is the eighth most read newspaper in Italy and the most popular in the "Triveneto" (Veneto, Friuli Venezia Giulia and Trentino Altro Adige) area, thus being able to cover the entire territory affected by the construction of the Venice-Trieste high speed railway. I gathered the articles where the keyword "Tav Venezia Trieste" was present. Between 2005 (when the debate about the Venice-Trieste line came more significantly to the fore) and 2011, 196 articles were found. I decided to code only the articles that develop a detailed thought on the Venice-Trieste line. For each article I coded the actors (up to three) that were cited because they had said or done something concerning the high speed railway and the keywords (up to two) that summarize the aspects of the affair dealt with in the article. For each actor, when possible, I coded his role within the debate – if he was an external expert, a consultant, an elected representative, an activist…; and his affiliation – if he belonged to an institution or a committee, if he took part

in the debate after someone had called for his intervention; his position concerning the construction of the high speed railway.

4.3.4. Semi-structured Interviews [21]

Some semi-structured interviews were made with people who directly and actively experience the controversy on the high speed railway Venice-Trieste construction, namely, key witnesses - both local administrators and citizens; some belonging to the local committees and some not. The aim of the interviews was to fill the information gaps I had with regard to the affair, thus add more coherence to the data collected through the other data sources. Moreover, through a talk with people who were and are still directly involved in the affair, I was able to explore more in depth the dynamics and aspects that I considered relevant in order to have as real an idea as possible of the participation.

I thus followed an interview outline in order to gather information on the processes through which he (and the group or institution he belongs to) got informed and conveyed information on the high speed railway construction; on the processes through which he found allies in the controversy; who the people were who he identified as his public and if he made use of different methods to approach each of them; what kind of experts and sources of knowledge he had consulted and which aspects of the affair he meant to deepen by appealing to those experts; what the arguments were through which he supported his position on the high speed railway construction; and of course, what was the meaning he attributed to the term "participation".

In all, 13 persons were interviewed:
- 7 representatives of the local administrations involved in the construction of the railway: mayors or councilors that have had a role in the affair, four from Veneto and three from Friuli Venezia Giulia;
- 4 activists belonging to the local committees: three from Veneto and one from Friuli Venezia Giulia. Three of them are absolutely against the railway construction; one has a less strict position;
- 2 citizens who are very active in the local context but not enrolled in the committees about the high speed railway construction.

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[21] The interview questions are available in the Appendix

4.4. The data analysis structure

The purpose of this research was to investigate participation in the context of techno-scientific conflicts, of which the Tav is an empirical case. This main objective was exploded in four more specific research questions, related to the keywords derived from the models presented in the theoretical chapters:

Communication
- How does information circulates among the different actors involved in the controversy?
- Which are the main channels used to convey information?
    - Are these channels used in a unique way by the actors involved in the controversy?
    - Are these channels autonomous or somehow interconnected?
    - Do the audiences addressed through the various channels differentiate the one another?

Opportunity
- Which spaces have been opened and what instruments have been activated to make participation possible?

Will
- What have been the reactions towards the controversial project?
- What have been the general attitude towards the consideration of others' point of view?

Heterogeneity
- Who have been the actors who mostly intervened in the controversy and try to have a say on the project?
- Has the controversial issue been uniquely defined by the actors involved?
- Have the definitions of the controversial issue been the same across time and among the different arenas?

The main results obtained through the data processing were organized through the use of word clouds(constructed from counting occurrences of words in the text of the post), graphs, tables, and excerpts of interviews. In order to show how effectively the issue displaces across different settings, the data analysis does not

keep the various sources separated, but develops around the research questions. Four macro-areas will be presented, corresponding to the research questions, that allow to frame in the most complete manner the dynamics that have characterized the controversy on which I have chosen to focus. This solution allows one to appreciate the connections that link one arena to another, nullifying the borders between them, between traditional and new media, between online and offline spheres.

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5

Data Analysis

5.1. Where then is there public participation?

The purpose of the following pages is to see how the contents above presented have taken shape in the context of the high speed railway Venice-Trieste affair, or in other words how the concept of participation has emerged from the collected data.

The remarks will be organized into four macro-areas corresponding to the keywords (communication; will; opportunity and heterogeneity) derived from the analyzed literature in order to frame the concept of participation and the definition of which has been given in detail in the previous chapter.

5.2. Communication

The Tav Venice-Trieste affair seems to confirm the relevance of the information in the definition of the dynamics of participation, as it was highlighted in the theoretical section. Approaching the dimension of communication requires to pay attention to the kind of information that circulates among the different social actors involved in the controversy. But it also requires to take into account the sources of the information, the channels used to convey information and of course, the audiences towards whom the information is addressed. These are the aspects that this first sub-section means to explore in relation to the case study.

The first thing that clearly emerges from the data is that the concept of information is tightly intertwined with themes such as transparency, widespread access and diffusion. But the effective implementation of this state of things is hindered by many obstacles: the timing imposed on the project; the complexity and density of the contents of the technical documents about the project; the difficulty

in accessing the sources of information. The following passages taken from the interviews are emblematic:

> I'm adding a point myself: on the 5[Th] of May we asked (the local municipality, *Author's note*) for the documentation which had been given to them on the 23rd (of April, *Author's note*) by Mainardi, who gave to each administrator something in general about the route of the railway line, and to each local Municipality he gave their own map, because it's only maps, no numbers or other stuff. We were told that the Municipality would have to ask RFI (Rete Ferroviaria Italiana – Italian railway company, *Author's note)*, for the authorization to give us the documentation, and that the paper docs would cost 500 euros and therefore they advised us to ask for the CD, which would cost only the price of the CD. OK. They would have needed 10 days to get the reply from RFI, and then they would have gone ahead. We are still waiting! In the meantime, even before we got this reply, the Municipality of Quarto d'Altino had already published everything on its website, and then also the Municipality of San Stino did the same (Local Committee_1)

> it isn't at all clear that this work is necessary! They haven't shown us the scenarios about the demands or the calculations, the model used to make the hypothesis about these scenarios, they simply told us. We had a meeting reserved only for the Mayors, which however wasn't open even to the committees, so if this is the way, we are not happy with it! (Public Administration_3)

There are of course many ways through which the information on the Tav's project, and the affair in general is conveyed. And there are many arenas where the issue is discussed. Sometimes they are complementary, sometimes they overlap. The parties involved in the dispute may use different media to reach the audiences they want to interest, they can choose to appeal to one another depending on the purpose they are pursuing. However, it is the media arenas themselves that can generate exclusion, by being more or less open to receive the contents delivered by the different actors involved in the controversy.

Going in more detail with the case analyzed, the first thing that catches the eye by having a look at Figure 11, obtained from a word frequency analysis carried out on the texts collected from the wall posts of the two groups on Facebook, is the great appeal to both traditional media such as TV, radio or print, and websites, blogs, other Facebook pages and Youtube. This result suggests the existence of an interesting interconnection between the different media arenas, highlighting that traditional and new media coexist and in a way strengthen each other.

More precisely, this interconnection has become evident in almost two ways.

First, as Figure 11 shows in part, in the daily press being often the source of information on the basis of which the discussion on other media, especially the Social Networking Sites, developed.

"No Tav Basso Piave" group   "No Tav FVG" group
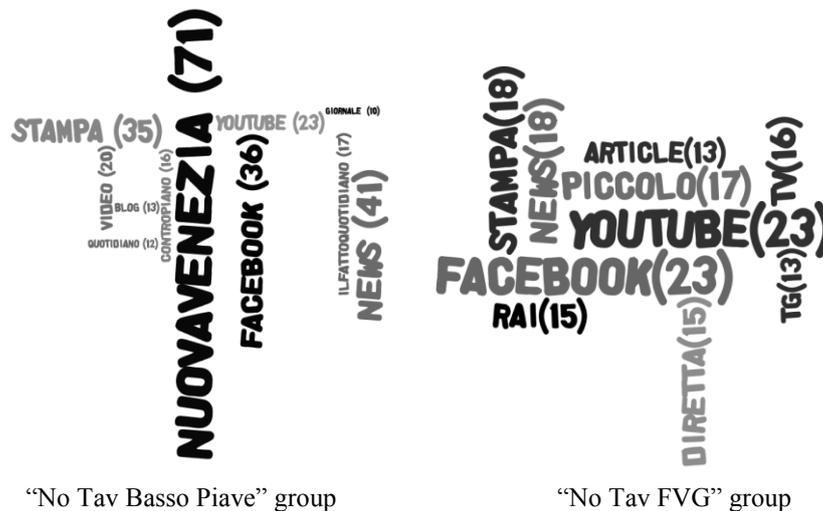
Figure 11 - Facebook groups. Media references

Secondly, in the processes of information collection: through the newspapers a glimpse of the news is given, then its content is deepened by surfing the Internet. An interviewee describes his usual behavior as follows:

> then, through reading the newspaper, "La Repubblica", or "Il Manifesto" I find something which interests me and then from that I go onto the web, usually to find out more or to download and then save the article (Lay public_1)

There are several data that prove the centrality of the daily press in the affair. 26% (No Tav FVG" Facebook group) and 45% ("No Tav Basso Piave" Facebook group) of the links collected through the Facebook posts (892 in the group "No Tav FVG", 185 in the group ("No Tav Basso Piave") have been coded "Newspaper/magazine/news agency/news websites". Almost half of these links represent the online version of local and national newspapers, and among them there is a predominance of "La Nuova Venezia," "Il Piccolo", " Il Corriere del Veneto, La Repubblica" and "Il Fatto Quotidiano". With respect to these preferences, some respondents belonging to the local committees, have pointed out that the coverage of the Tav Venice-Trieste affair, and in particular the initiatives

promoted by them, have not been ensured to the same extent from all the newspapers:

[…] and there too, unfortunately, when we organized the conference, the " Il Piccolo" mentioned it, the "Il Gazzettino" did too, but the "Messaggero", which sells more, didn't run it… (Local Committee_2)

And anyway we understood which papers are a bit more interested in this issue than the others and even the fact that Loris Mazzetti wrote "Tav: the train of disagreement" [22][a book on the Tav affair, *Author's.note*]: I learnt it from the "Il Fatto Quotidiano"… so reading the papers you see what happens (Local Committee_1)

Further confirmation of the relevance of the daily press comes from the nodes of the map created from the queries that have been entered more frequently in the Google search engine: among them there are a number of mentions of newspapers and sections of newspapers ("ediliziaterritorio.ilsole", a section of the Italian leading financial newspaper "Il Sole 24 ore" and "Il Piccolo", a local newspaper) (Figure 12).
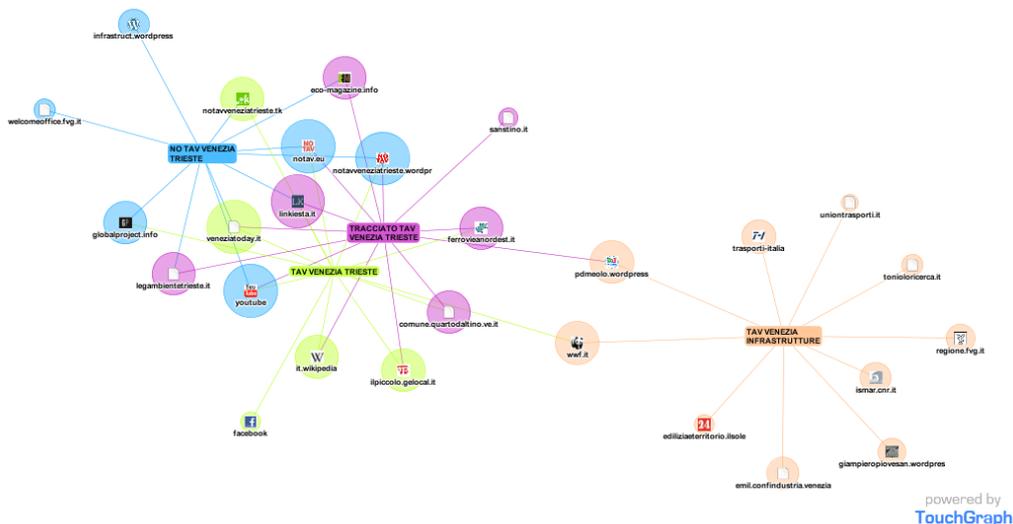

Figure 12 - Map of website based on the most frequent queries entered on the Google search engine by the users interested in the Tav. Created by using Touch Graph CEO Browser

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[22] My translation: "Tav il treno della discordia"

The interviews themselves confirm this finding, showing that the daily press, and in particular its "offline" (printed) version, has had in the course of the story, but in general continues to have, a major role in the dissemination of news. This is in part related to the fact that they are accessible to the ranges of the population who are not familiar with the new technologies.

> well, I think that now, in spite of the web being widespread, I believe that the daily newspapers remain one of the most important points of reference, the one which still reaches all levels of the population, both the youngsters, who could well log-in and have a look at it on the web, but especially older people who are not so used to the IT tools and see the newspaper as the main source of information. In addition to this, two or three times a year we send a municipality paper where we talk about the issues which are current or on the works in progress which are being carried out at a general level (Public Administration_2)

In addition, it is worth to signal that according to several interviewees, the daily press has had a relevant role especially with regard to the beginning of the affair, when the information on the infrastructure was sparse and difficult to find, it has become a key tool for raising awareness and thus for the building of alliances:

> we learnt about this issue through the press, which quoted, let's say, the outcome of the question time submitted by the member of parliament Mr Viola (representative of the Veneto Region), who voiced the issue for our area. At that point, completely lacking any information, as there was no information on the territory, we tried to get some bits of documentation and from that point on, given what the hypothesis of the project was, we decided to become the actors in this process, becoming ourselves suppliers of information given that it was completely lacking. (Local Committee_4)

> well, I got involved because practically at the time when the issue emerged in a way which was also pretty frustrating, in the sense that we would read articles in the newspapers, everywhere and still there was not an iota of documentation, of precise information to which one could refer to, and I got involved because I was a municipal councilor at the time and reading these sorts of headlines I worried, also as I understood the extent of the issue (Local Committee_3)

The collected data clearly show that each medium is characterized by a specific utility in relation to the others or to the strategies beyond the different actors involved.

From the point of view of the committees, the importance of the support provided by the platforms for sharing documents, videos etc., and in particular the support given by Youtube is worth mentioning.

This can be seen in part by the data shown in Table 2, and above all, by the details added by the interviewees, who emphasize, among other things, the use, at times almost maniacal, of cameras to shoot and have a tangible proof of everything that happens. It has been said for example:

> No, but Mainardi (the Special Commissioner for the Tav Venice-Trieste, *Author's note*) too, there are also some videos on Youtube about the television news, where he had declared his willingness to meet the people etc., etc., but we never saw him! (Local Committee_1)

> and we are using the films to faithfully and directly document what the technicians or the politician say when they claim something or other. Therefore it is not interpretation, it is the reproduction of what they say, so we say, we absolutely try to faithfully respect those things which are the documents, and the documents are deposited, and the document is a documents and is not a conference, an intervention, assembly, council meeting, so someone who makes some statements must take responsibility for what was said (Local Committee_2)

| | Facebook Group | | | |
| | No Tav Basso Piave | | No Tav FVG | |
Type of link	No	%	No	%
Blog/forum	16	9	78	9
Newspaper/magazine/news agency/news websites	83	45	232	26
No Tav Website	6	3	63	7
Pro Tav Website			2	0
ONG/other associations Websites	6	3	20	2
Live video streaming	1	1	10	1
TV/radio channel website	4	2	24	3
University website	1	1	1	0

Websites for documents sharing/download	2	1	25	3
Websites for petitions/causes	2	1	3	0
Facebook	30	16	206	23
Youtube	12	6	188	21
Institutional Website	6	3	4	0
Mobility/ railway-related websites	6	3	4	0
Other websites	10	5	32	4
Total	**185**	**100**	**892**	**100**

Table 2 - Facebook Groups. Links

Social networking sites stand out as an effective tool for the dissemination of brief pieces of information, especially about events that take place in or concern the local area. As a proof, for example, the fact that within the Facebook groups analyzed, there is high number of links to other Facebook pages (16% in the "No Tav Basso Piave" group and 23% in the "No Tav FVG" group), which largely coincide with the so-called "Facebook Event", a calendar-based resource which can be used to notify users of upcoming events (see Table 2). These kinds of tools are instead less suitable to convey more complex and full-bodied information, like most of that concerning the Venice-Trieste rail route. As a matter of fact, an interviewee says:

> something also went on Facebook, but thinking about how Facebook was structured at the beginning, it wasn't very suitable for this kind of dissemination, now you can upload files, it's possible to get the various documents available, however we are talking about 500 files here (Local Committee_3)

In general, online tools allow us to easily convey information to a large number of people and it is exactly their speed that is described as their most valuable characteristic. In the words of an interviewee:

> Because it's obvious that there really is an awful lot [of data, *Author's note*]! As it is evident that, anyway, the whole exchange of information is very, very fast through the internet and the webmail, one can reach people easily and quickly, it's almost unthinkable, and this is certainly a very positive fact (Public Administration_2)

Public authorities have used the Internet mainly to facilitate the communication with the public, making it more direct and faster. They said that they use it regularly also to inform the public about their institutional activities. However, at present there are not established policies about the use of the Internet for the governing of the territory. Everything depends on personal interests, sensitivity, inclination to the use the various online tools. Several officials say, for example, that they use their Facebook page to communicate with members of the public. It is only in the last year that permanent sections devoted to the high speed railway have begun to appear on the websites of the municipalities. Generally, the trend has been to publish some information, mainly in the form of press releases or resolutions. More and more experiences of e-government, especially in the form of reports to the municipality of any inconveniences or malfunctions in the area are now beginning to appear on the websites of the municipalities. One interviewee says in this regard:

> We are now undergoing a restructuring of the website and these aspects will be included in the restyling that we are about to do. We already have a very large amount of information about the entire administrative life, so that even the (council) deliberations are published, are put on the web, there is also a column where the Mayor answers the requests coming from the citizens and the next step will be creating a section on the issue of the Tav so that anyone interested and with some time to spare could understand at which point we are with this work. (Public Administration_2)

> in our small village there are surely many citizens who use this information, use the internet, and it is these people we thought about when making the web site, updated with all the deliberations, there is a section with all the documents which are produced and with the announcements of the meetings, etc. Then I have my personal Facebook page where I inform, even if only in a more informal and direct manner, and where they (the citizens, *Author's note*) also put questions… Therefore there is an informal dialogue through this channel (Public Administration_3)

The lack of information on the institutional websites also affects the higher institutional levels and has embarrassed not only the citizens but the local administrators themselves when they were in search for information. One interviewee says:

> the site, I don't know, of the Veneto Region, of the Friuli Region, that's not the issue….not even the project… I mean, we have published the project on our site, clearly not everything as it is one cubic meter of paper, so from an IT point of view it is heavy, but at least the tables which affect our council - two more general tables and their main report we

did publish those on the website. Because we had encountered the same problem up line, which is about institutional sites, the best we could find were some sites, let's say issued by some organizations in favor of the Tav [...] however it was something a bit homemade, but everything started from the internet effectively and from that we found a few institutional sites and mainly pro Tav and alternative sites with people in the know. (Public Administration_4)

Granted the undoubtedly positive characteristics attributed to the internet, some interviewees have pointed out three main difficulties that its use in the context of a dispute can bring about. First, the difficulty of maintaining the online contents updated: an effective presence on the internet requires, for example, to be able to ensure that there is someone who can constantly take care of it. This means a big effort in terms of time, an effort that in particular committees, who act on a voluntary basis, cannot ensure. In addition, the possession of the skills to effectively manage all of the various tools that the Internet provides is not that obvious. The second difficulty is in part connected to this last point, since it concerns the e-skills, and in particular, the ability to orient, to select and manage the amount of the information available online.

> The internet is something extraordinary as it allows us to communicate quickly and have a large quantity of data available. The problem is simply to understand and select the data (Lay Public_1)

> Well, then, the Internet is an inexhaustible mine of information and data, so really a lot can be found, some very important stuff but also some stuff of very low quality. About the internet, the problem we all share is to understand what the basic, important information is, and distinguish that which is the less truthful information. That's obvious that on an issue like that of the Tav, a search on the internet risks to definitely lead, let's say, to an excessive use of the internet itself. (Public Administration_2)

And third, the difficulty to manage and convey the data and documents which may be collected. The following words say it clearly:

> for example, the Oversight Commission has among its duties to judge if the project is presented in clear language. For example already this, in our case, didn't happened: because on the one hand the coastal project had 700 technical files, and in the case of the project by Mainardi we had merely technical projects without a single report. Therefore there is a clear imbalance in the information and communication and this fact alone could invalidate any possible decision (Public Administration_3)

then the CDs arrived, because the pressure made was such that at least the Councillors had to be given these CDs. In fact, they were DVDs because a CD wouldn't even be able to hold all the data that were there and then immediately we asked ourselves the question of how to deal with it, in the sense that we are talking about 4 CDs of 4-5 gigas, so just a bit less than 2 full DVDs, a bit more than one (Local Committee_3)

In terms of ability to transfer information, especially when it is contained in a plentiful amount of documents, it is worth to be mentioned that multimedia supports such as CDs, DVDs, or Power Point slides have been providential to both "convey" content, and to make it accessible, comprehensible to most people. In the words that follow, the reflections on this by an activist and by an administrator:

I'm repeating it again, we simplified a lot, but the slides were indeed very helpful, in the sense that the competences and the knowledge we had accrued were concentrated there – anyway, it seems to me that they are quite a good tool (Local Committee_3)

as far as the new technologies are concerned, it is clear that now that we get support from all those technologies which allow us to make immediate, visible and evident the content of the information we want to give, thus video projectors, Power Point slides made more or less in a proper way, but at this point we are reasoning in these terms. So on the web it is really possible to find basically all sorts of stuff (Public Administration_2)

Another interesting confirmation to the existence of a difference of uses among the different arenas that have been analyzed comes from the data concerning the attention given to the "Tav" issue by each of them. At this purpose, if we agree that the attention given to the issue can be measured through the number of Facebook posts per month and the number of articles of the newspaper per month, then we can see that during 2011 (the only year that is covered at least for some months by the three arenas) there is not a fully shared path among the three arenas (Figure 13)
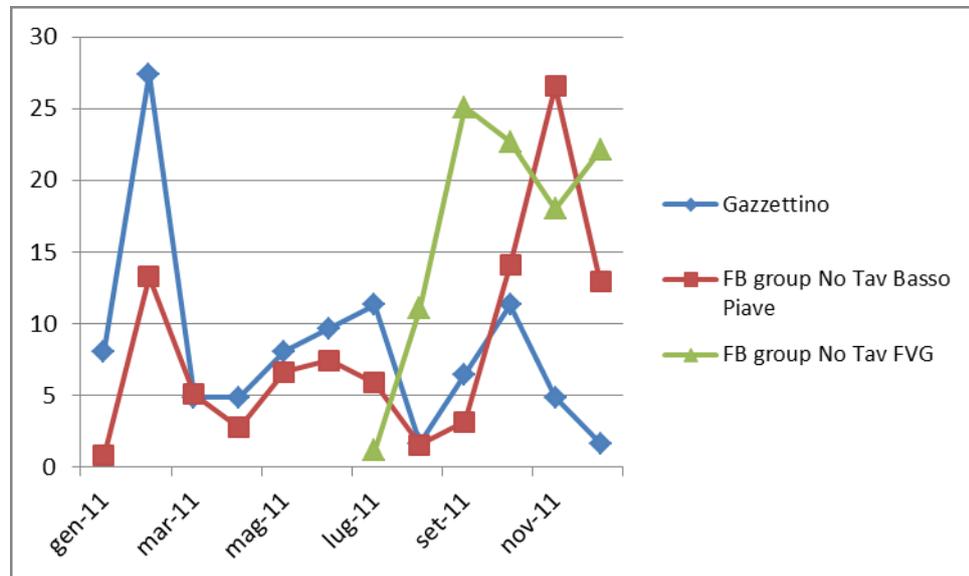
Figure 13 – N° of post and articles per month. Year 2011 (Standardized)

If we compare these paths with the ones obtained through the use of Google Statistics, which shows the interest in the "Tav" issue for the three Provinces affected by the passage of the Venice-Trieste railway line that during 2011 recorded the major number of searches (Figure 14), we find that these paths are quite similar to the one that refers to the newspaper "Il Gazzettino", with three main peaks in February, July and September-October. With reference to the Facebook groups, we note that the "No Tav Basso Piave" group's path is quite in line with the ones just described, while the "No Tav FVG" seems to have a slightly different one, but this may also depend on the fact that the group is more recent. If we look more in detail at particular events that took place over those months, we see that in February some Municipalities declared their position towards the project; in July the Special Commissioner for the high speed railway Venice-Trieste was officially chosen, producing disagreement among the activists who see a threat for public participation in his appointment; in September two girls who had taken part in a protest in Val di Susa were arrested, causing an increase in initiatives to promote their release; between the end of September and the beginning of October, the third hypothesis of the proposal for the part of the railway line concerning the Veneto Region was presented; in November the European Commission judged one of the Committees' petitions to have merit. It must be said that of course, not all the considered arenas pay the same attention to all these events: the arrest of the two activists, for example, is very much debated

inside the Facebook groups (in particular inside the "No Tav FVG" one), while it is not mentioned at all in the newspaper "Il Gazzettino".
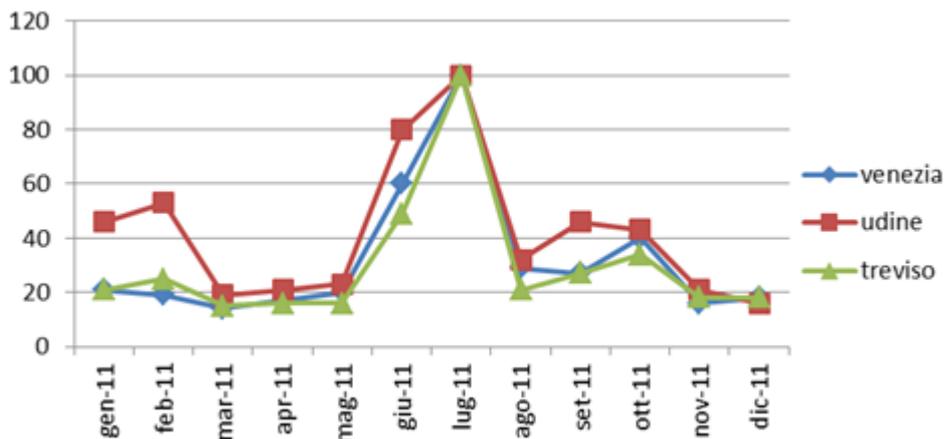
Figure 14 – N° of searches for "Tav" in Google. Year 2011 (Standardised). Processing on Google Statistics'data

Facebook appears as a key element in the dissemination of real-time news and contents reporting the course of an event or initiative. These kinds of information have taken the form of links to the websites for spreading live content, such as www.ustream.tv or (Table 2) but also of posts (see the entries protests or events in Tables 3 and 4). One post, for example, says: *"They're attacking the cabin"* or *"Using tear gas on protesters in Giaglione. Everyone should come to the Val di Susa, to the barricades on the highway, in order to support the fight!"*)

With regard to the television, the interviews show that local committees recognize the potential that the TV has to convey information, especially to some segments of the population and prove to be familiar with its workings but they also tend to appeal to this means in a limited way, being convinced that it can be truly effective only if specific conditions occur, for example, if a face to face debate is made possible:

because if you bear in mind that the newspapers we are using are for the politicians […]. We go very little on the TV, or almost never... as we believe that this context is useful to us only if there is a chance of a face to face debate, otherwise the risk is that today we go on, we say something and the next day the program gets the Mayor or the MP who says that the work is strategic and that's the end of it, and so we go on TV very little as No Tav group and so Facebook is instead a means which reaches everyone (Local Committee _1)

and then to the regional news program, to the regional news program we send the press release... I'm saying, what can I do to avoid that at least they should give the news...because they have this column "today's appointments" – I don't know whether you regularly watch the local Friuli Venezia Giulia news… so, I send the email, let's say at 3.30, because at 3.30 the shift of the person who prepares the announcement starts… I'm telling you because it sounds ridiculous to tell the story so much in detail but it did happen sometimes that they didn't broadcast the announcement and so I phone… you have to keep a low profile now, given the discourse in Val Susa, where the protest are growing and therefore there…the newspapers and the regional news program and our direct mailing lists (Local Committee_2)

The observations made here, focused on the concept of communication, represent some essential conditions for participation and allow to put the first pieces of the framework that embeds participation. In the next section, we will make a step further by considering if opportunities for real interaction between the different actors involved in the controversy took place, and in the case, at what conditions they occurred.

5.3. Opportunity

The availability of opportunities for interaction and discussion is of course a necessary ingredient so that participation could be realized in the practice. None of the participatory tools highlighted by the literature, such as, for example, citizen juries or consensus conferences or public debates have been applied, at least so far, in relation to the high speed railway affair. In the context of the Tav Venice-Trieste case, the acknowledgement of the need to establish a balanced relationship between the side of supporters and that of opponents, and its translation into concrete actions has turned out to be, for various reasons, difficult. The Val di Susa case, that as we said, represents the emblem of the high speed railway affair in Italy, has influenced to some extent this state of things. A local administrator says, for example:

no, first of all this thing was feared especially by the institutions, so as not to end up with another Val Susa case, that is to have to a very serious clash... well, we are fairly far away from Val di Susa, with what has been going on recently, however probably things started like this. I do not have a full history of the Val di Susa, but I guess also from what I remember that at the beginning, there was a debate which involved the local councils, a commission was created, so maybe it's repeating itself in a very similar way, the beginning of the story, I don't know whether we are going end up like that, I don't know (Public Administration_1)

Part of the responsibility for the difficulties in setting participatory practices in the context of these kinds of controversies lies in the existing Italian legislation, which, rather than promoting public participation, tends to make the decisions on this type of issues an exclusively institutional matter and to relegate them to decision levels far away from the local dimension. These elements contribute to make the citizens feel subjects of a misuse of power and as if they are losing control of their territory. On the other hand, the local administrators say that under these conditions, their function of being intermediaries between citizens and the higher levels of government, sometimes becomes difficult to manage. An interviewee says about this:

> you at this point already know that the role of the local institutions is more than minimal, these are works which suffer a great lack of participation and also a great lack of participation in particular as far as the VIA (environmental impact assessment, *Author's note*) is concerned, which in theory foresees a large amount of participation that here isn't foreseen by the law. With the Legge Obiettivo (Italian law relating to this kind of infrastructure projects, *Author's note)* in practice a lot of participation is skipped over. This is it, what the local bodies couldn't do on the project. Apart from giving a non-binding opinion, which the Region might accept or not, and forwarding it to the State, as the VIA is done in Rome, but it is not done all in one go! (Public Administration_1)

> The question of participation is the most difficult thing today, that is to get the people to come, well, today it is a difficult thing, because we did everything so that the people wouldn't come to the local council, on the on hand there is a cultural crisis so that there are football matches every day on TV, EVERY DAY… On the other hand, those who were public administrators, because we are talking about participation WITH the administrations, and those who were governing when opportunities for letting the people participate were given, then do not meet the requests of the people who participated. Despite this, the people also mind their own business, in the sense that they participate if the argument interests them, and if they are not affected by the third lane, they don't participate. (Lay Public_1)

In the case under examination, from the side of local committees, petitions, especially in their electronic form and addressed to the European Commission, have been a very exploited tool. This is in line with the contents of the literature review. As the following words, taken from the interview with an activist explain well, petitions have been a useful means to find possible allies, also outside the local area, in order to support one's viewpoints. For example, petitions have allowed the activist to make their opinions on the groundlessness of some institutional speeches on funding or the imprecision of some of the design

hypotheses (that does not match the European regulation), or the scarcity of public involvement in the affair, visible to the European representatives of other States and thus to enroll other actors and re‑open the debate:

> There is another fundamental thing, incredible, but in another way it is possible to understand: in Europe they know nothing about it! That is, the information at the level of the European Community is that conveyed by the governments, like the regions or the central government! Therefore if a government is in favor of the work, you can well believe it will spread information, but if it were against it, no way! Then how could you be effective? It is difficult to convey information to the members because obviously the Italians follows Italy, the Germans follow Germany then, at the end, it is that is the decisions that are voted on ! Then the petition is a further tool with which you reach the public... because, what do you read in the paper? The EC shared the project of the Baltic Adriatic corridor presented in Friuli Venezia Giulia… if you go and dig inside, you'll see... Because some contact with the German European MP was created At the Italian level there are only two, maybe three, in fact from the middle of November will shall have an appointment with the one who took her place, therefore it is fundamental to make them aware! The petition or audition allows the creation of a debate, if the citizens do not reach out of this, however minimal chance of participation and involvement, that is what could the others say?! Therefore, even with limited forces, we did present the petition, the petition you can submit with 3 signatures: we presented it, in the end, with more than 1,500 signatures! Less than in Veneto where they had more than 3,000 signatures! The petition dates back to September 2007 (Local Committee_2)

Taking up again a more general discourse on the opportunities for interaction, all the interviewees have agreed that in order to be allowed to speak of true participation it is essential to ensure the timely intervention and opening of the discussion to the stakeholders from the beginning. Equally important is the inclusion of the zero option as a possible outcome of the discussion. As the following words summarize, none of these conditions were observed with the high speed railway:

> it should all be changed, in the sense that first of all the decisions were wrong from the start, that is those who saw in the fact of making an investment on the Tav between Venice‑Trieste, to start this thing not only did not speak to the people. But they didn't either listen to the people who know, the technicians, they didn't speak to a professor of transport nor to an expert of railway transportation, some expert, I mean they didn't ask anybody, they decided that the region needed this thing because there were precise pressure groups which wanted this thing. Now I don't know what they have, but with respect to what the citizens really needed, not even a survey had been carried out on like, "how many people would used it? Just to say, a study, a statistic, it just wasn't done. (Local Committee_3)

Then, the participation in effect is seen today almost only as a communication and instead it should be something which starts from the beginning with the involvement of those who would be affected. Therefore you should start from the problem has been already created and you must justify it. Thus participation is often justification, an excuse to justify the project that you have already prepared. While it should be the opposite; you should get there with an idea: if the problem is to bring more people onto the railways, more goods on the railways, you should first point out the problem and say what the objective you want to reach is, you want to find the best way to get it, maybe even with five suggested hypotheses and then choose one. Then one way would be opened, not one after the project is presented; this almost never happens in reality, in almost all the works, either little or big, the paths of participation which are set up by the local bodies or the institutions, the more distant you are from the territory the easier it is that the path is without participation (Public Administration_1)

In the context of the Tav Venice-Trieste affair, individual exchanges between the local administrators and their citizens have occurred, but in an absolutely informal way and dependent on the predisposition and the sensitivity of single actors. For example, in some cases, according to the respondents, committees have passed new information to administrators and viceversa. The following words by two of the protagonists prove it:

yes, then we don't have the same position, eh! We also have different manners and different roles, but I believe anyway in a form of active democracy, of active participation, also the one from the committees. I myself I was part of committees, also the one about zero garbage, therefore no incinerators but yes zero garbage because the simple refusal is not enough. I must also say that also some useful information on the alternatives, etc., also came from the world of the committees, therefore the positions there are also varied and there isn't just the no, there are people who are well informed, more, people whose work of documentation was useful to us too, in a relationship respectful of each other's role, which in my opinion was constructive (Public Administration_3)

the core of the matter, the heart is that information is not the idea "it must be done in this way!" if we discuss maybe we see our way of thinking and the outcome is "it must be done in this way", which is "what needs to be done?" I reply, but the clue, I repeat the clue is the information, because we are still at the stage where some information is unknown to the administrators, some data are really unknown. To say, the famous letter that Mainardi sent, I forwarded it to the Mayor, and he said "Mainardi had mentioned it in passing" but, it was me the one that forwarded the documents to him, well, it is not to be boastful, but just to say it, so I had received it from the Mayor of Quarto d'Altino and then forwarded to my Mayor (Local Committee_4)

It should be said that the occasions for discussion between institutions and citizens have mainly taken the form of public assemblies organized by local committees, and Municipal councils with the high speed railway construction on the agenda. More participatory dynamics can be seen in the establishment of the permanent Commission on the road and traffic conditions (Commissione viabilità) set up by the Municipality of Bagnaria Arsa. This Commission is made up of an heterogeneous group of subjects belonging to the Municipality and whose contributions have been considered relevant in order to discuss the traffic questions that affect the territory: the municipal groups of government and opposition; the representatives of the manufacturers, so farmers, artisans and shopkeepers, and a representative of the local committees. The first aim of the Commission is to foster the exchange of information and make available the highest amount of knowledge possible. For the sake of truth, it is not a completely new tool as it was first introduced by the previous Mayor but some substantial changes have been made to it so that somehow it shows the will to open a debate on these kinds of matters: a cyclic meeting of the Commission has been imposed and the representative of the local No Tav Committee has been officially invited to take part indeed as a representative of the local No Tav Committee. The representative of the Committee, while recognizing that the Commission has substantially an advisory role only, appreciated the fact that this is a means to bring statements, documents, information directly and not only indirectly, thus in a form, let's say official, inside the institutions.

The interviews clearly revealed that with regard to the use of tools or opportunities for participation, there is a slightly different position among public administrators and committees. Committees seem to be rather unwilling to introduce measures that in their opinion only apparently open the debate. They are convinced that the present way the Italian institutions take decisions is in contrast with the rules that govern these procedures thus in their opinion it is nonsense to try to adopt them if you cannot get to the bottom of them. For example, concerning the public debate procedure, an interviewee says:

> we tried to make our local administrators understand that the French debate is called French style debate for a precise reason, that in France it is regulated, here it is not and the French style debate discusses also if the work should be carried out or not. Instead Mainardi, in the "Corriere del Veneto" of the 12th of April of this year declared "the Tav is not under discussion, the Tav will be done and that's it, what is under discussion is just the route" so that gives you an example, so on this basis you cannot say "let's have a French style debate", this selling the French debate to the citizens is a good illusion, a nice dream but the issue is

not in these terms. The French style debate is done if there are two sides who are willing to have a discussion, if there is a side that definitely is not willing to discuss, I'm wary of this approach, and we pointed it out (Local Committee_3)

Despite this, in the course of my study, public debate has often emerged as the model to aspire to. The statements in favor of the application of this method made by the Minister of Infrastructure as well as the fact that it was first introduced in the context of a controversy similar to this one, has certainly influenced the orientation of the thoughts on this model. However, there are some recurrent positive qualities that the interviewees see in its application: an improvement in information transparency, an improvement in trust among the actors involved, a greater sharing of the final decision. An interviewee puts it like this:

I'm sure that if a situation of dialogue and transparency is created, this situation allows, on the one hand that ideological and extremist positions are diluted, so to speak, and on the other hand that, in a climate of dialogue, the solutions could be discussed also to find the best solution from the social, environmental and economic point of view This was an intuition that then, analyzing the subject more in depth, it found that the way the French have the public debate is the one we are aspiring to too, the possibility therefore that, from something which could be merely a call to participation, transparency and information, we would in effect move to a setting-up of something which is not naïf nor ideological, not flag-waving but very concrete and that all the observations could be listened to and evaluated. If then there are observations which bring about a useful contribution to resolve the problem, to find the best solution, to have them accepted or if they are observations, positions with no foundation it is explained that there is no foundation and therefore also the people are calmed down and legitimate doubts too are acknowledged (Public Administration_3)

The activists who have been interviewed have complained about the lack occasions where an official, face to face discussion between the side of supporters and that of the opponents could take place.

but then look, the dialogue more or less was always there, with those who wanted it, clearly, because there have been positions, like in Portoguaro where "with the No Tav groups I don't even want to talk" however with those who anyway accepted somehow to work with everybody, the dialogue was always there - thereafter that this dialogue was translated into concrete fact… well, this did not happen (Local Committee_3)

Talking on the opportunities for interaction, a mention has to be made on the role played to this end by the internet. For Committees, the internet appears often to be the only way to have a say. The operating logic of the internet provides a

greater opportunity of expression for them. Local committees show instead a certain distrust towards the mainstream media, who have a great potential in catching people attention on a topic and in mobilizing them but who tend not to give enough weight to the contents they convey and sometime present facts in a way that is not completely true to reality, over-emphasizing for example protest and forms of opposition instead of reporting pure information or points of view. The following words are explanatory:

> but I'm telling you again, it is very difficult to change who pulls this thing along, and it is the mass media, we don't have this capacity, also because the mass media do NOT publish what we send them - just to say we sent a press release about the last declarations that Mainardi made, and on Facebook it was shared all over Italy, meaning that the whole of Italy understood the sense of those declarations, while in the newspapers there was nothing, I still haven't seen it anywhere (Local Committee_3)

> the press came round, the reports on the news were broadcast, the journalists' stories were broadcast, reports on the TG3 (newscast, *Author's note*), there were articles, however the article were always… never deep, always, let's say, evasive, so you would see an article, even a photo, but then you'd say "here, what does it effectively tell me?" empty articles, maybe also because of the lack of preparation of the journalist, but if we have to put it as a graph showing the coverage of the issue over time… that would be poor! Then at the beginning we started with a very high curve, then, what happened? From a fact of news, those meetings looked like a simple run-of-the-mill news story, but as the interest and the participation of the people, the analysis which were becoming deeper and deeper, digging into contradictions, and therefore become a danger as the elections where getting closer, etc. etc. You could see that also the interest for the articles, decreased too! All in all, you could see that they behaved as if the committees were phenomena, a run-of-the mill story, not on the content, on the message we had, on the news we had, but only on an external aspect, because there were people there! Then afterwards obviously, at a political level, surely there must have been, I don't know, I suppose, seeing the diagram I mean, that they tried to soften the problem, to dilute it, as we continue organizing our meetings (Local Committee_2)

Another important aspect to highlight with regard to the Internet, in line with the statements made by other research (for example, Della Porta & Mosca, 2005b), is the key role of online tools for the internal organization of the committees, a feature that has been particularly important in this case, which covers as we said, different territorial areas. The words below illustrate this point:

> yes, for us yes, it gave us the possibility, as the tool works, on the one hand to facilitate the communication, and on the other hand to be quickly able to be in contact with each other,

and therefore not need to travel around a lot. [It allowed us, *Author's note*] to build connections in a faster way and have the possibility to exchange documents, information in a faster way and then to be operative once we had the basic facts available [...] therefore it was important for our growth, little by little, while the movement grew and important when we had the chance to have documentation to spread or to be able to compare with others. I'm saying that the first phase was really difficult because there was nothing available (Local Committee_4)

At the institutional level, as we already said, new technologies have been used to improve the passage of information from public authorities to citizens, sometimes vice versa, but their potential has never been pushed to the creation of participatory moments that were indeed interactive.

The Social Networking sites appear useful especially for a widespread publicization of events and initiatives, such as demonstrations or municipal councils, or contents that do not require too much in-depth analysis. The study of the two committees' Facebook groups shows a tendency to deal with the issue by mainly highlighting traits and arguments that justify or support the point of views of the committees. These dynamics lead us to wonder if SNSs actually have the potential to act as a further arena that fosters civic talks or simply an effective way to strengthen a collective identity with the risk of promoting a one-dimension mentality (Dalghren, 2007; 2009).

According to the data that have been collected it is also possible to say something more about the degree of interaction inside the two Facebook groups analyzed or, putting it differently, about the attitude of the groups' members to actively write on the group wallpost and use this data to have a measure of the degree of mobilization inside the groups (Table 15) it is clear that in both the groups, a small number of people are responsible for the majority of the contents that appear on the social network.
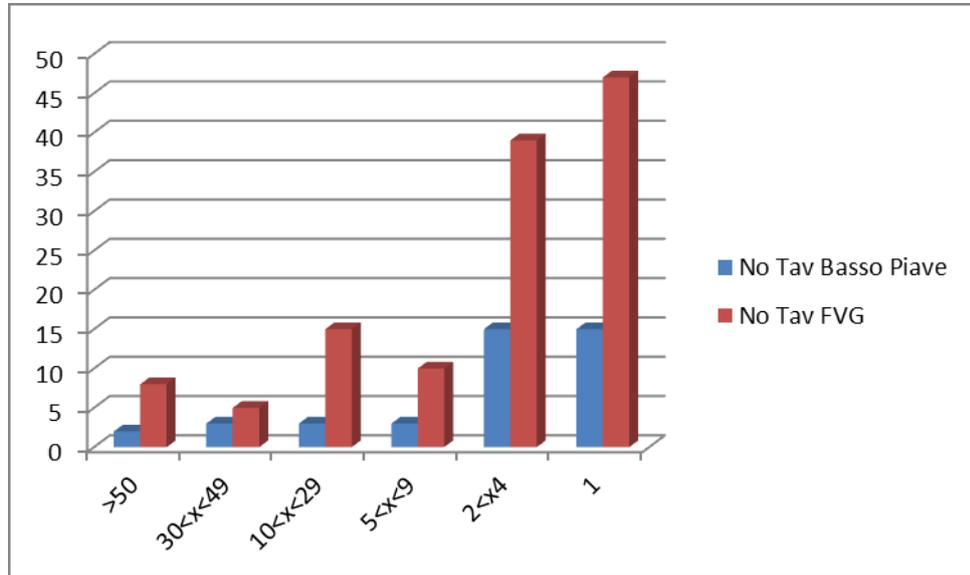
Figure 15 - Facebook Groups. Number of people per number of written posts

The same dynamics can be observed if we look at the number of feedbacks received by the posts in the form of likes or comments: the largest amount of posts received 0 or at least 1 like or comment (Figure 16 and 17) Although this is quite frustrating if compared with the most positive scenarios on the possibilities offered by Facebook to create spaces for discussion and enhance democracy, this is further evidence that Facebook is better suited to other purposes and that each media arena has its own role and gives its own contribution to the controversy.
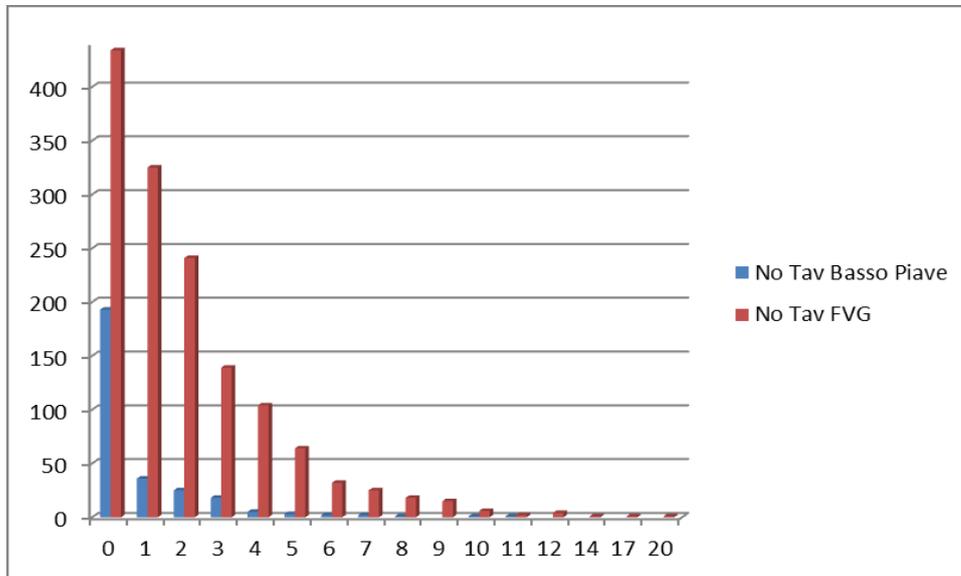
Figure 16 - Facebook Groups. Number of posts per number of likes
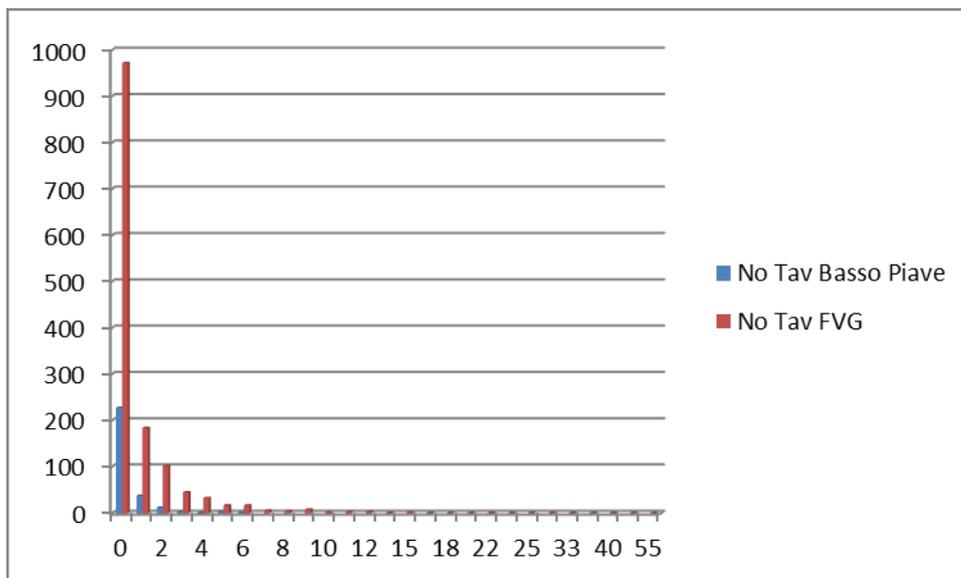
Figure 17 - Facebook Groups. Number of posts per number of comments

As it partially emerged from the observations presented in this section, the possibility to rely on tools and opportunities that support the involvement of all stakeholders affected by the controversy is largely dependent on the willingness of these actors to consider alternative points of view and your then put into question their certainties. It is the exactly the dimension of the "will", the next theme that we are going to examine.

5.4. Will

In this section, participation will be investigated according to the dimension that highlights the propensity of the actors to consider perspectives and opinions on the debated issue other than their own. Therefore, will is partly dependent on the essence of the relationships that link together the various social actors, and in particular the ones that affect the citizens and their representatives.

The degree of mutual trust them appears to be a key element. In the practice it is constantly challenged, and often hampered, by prejudices or by a tendency to treat those who hold a different opinion as an indistinct mass. Committees are accused of extremism and entrenchment on their positions; institutions are accused of being closed and slaves to the reasons of power instead of the reasons of common good. Actually, on both sides, there is an amazing variety, which instead could be somewhat exploited to improve the quality of community life. Some of the interviewees said:

> but this trust relationship is broken and it should be regained, there isn't anymore the faith that this thing effectively is useful and unavoidable for the common good, one thinks about the usual logic of the power groups, interest groups or inertias, works planned in another world, whose path seems to continue anyway, and then this is not acceptable. I am convinced that the Italians, and those from Veneto, or from the local borough if you explain it to them they'd understand, the problem is that I'm not able to explain that the Tav is useful and therefore as long as I'm not able to explain it, because we ourselves in the local council we didn't have the elements for an evaluation, I cannot do it...(Public Administration_3)

> the fact is this, it should however, obviously as it happened for the biomass power stations, not leave the committees alone, not even the "No Tav". Therefore all civil society, the associations and all the groups like Eticamente or the Scouts (civic groups, *Author's note*), they all should join together with the committees, including the "No Tav" one, to guarantee a, how can I put it, to have the widest possible chance to communicate what they are promoting. Unfortunately it works like this, even if you are a respectable person, but in my opinion you are an extremist, a No Tav… you might be able to persuade me, but the other 10 neighbors would say:"yes but, they are violent, they make a mess" etc. (Lay Public_2)

The issue of trust is directly connected to that of the relationship between representative democracy and the widening of the participatory process. In particular, the case study poses the question again if the idea of representative democracy might or might not fully respond to the need for participation becoming itself one of the issues debated within the controversy. To put it differently, using

an example taken from the high speed railway affair: is it sufficient that the Commissioner of the Government for the Venice-Trieste railway line involves only the municipal administrators in the conference for the presentation of the route?

> in the end, the route of the Tav is not participated in. It is simply institutional! In fact, it is the local institutions who inform the citizens, and not the institution which is proposing it! In the end there is no participation in the Tav, except with the local institutions, when the local institution becomes the speaker, - I stress, the speaker – for its citizens, while it presents the project as if it were its own, even when it isn't. Therefore it is the start that is missing. But it is impossible with this law on the infrastructure projects to act differently (Public Administration_1).

The question of representativeness, intended as legitimization to take part and have a say does not only concern the institutional level but also the committees, whose position is belittled because it is considered to be the expression of only a small part of the community. The same action of the committees against the infrastructure might be diminished by these factors: the fact that the general population tends not to express, act as an a priori justification to the interpretation of the committees as the mere expression of the point of view of a small number of people, which is thus not representative of the community and sometimes as a force that obscures the real feelings of the population:

> What I'm a bit sorry about is that sometimes indeed it is difficult to hear that, I don't say the majority, as it is not the majority one sees, but in the sense that generally speaking those who are against something in various occasions manage to monopolize the scene a bit, and I would like to hear also a bit more from those who live everyday with it, because in reality I know that there is this thought that thinks that it would be good that those who are against it would let the others talk a bit more. Because I've noticed that [the No Tav committees' speakers, *Author's note*] have the tendency to go with quick-fire speeches, which are somehow similar to each other and there is a monopolization of the evening and it is almost, how can I put it, creating a certain fear in the others, so that the person who would be in favor of it feels as if he were this black sheep. It's also maybe true that these people do not have other chances to make their voices heard... so maybe. What would be necessary would be a rebalance of things (Public Administration_4)

More in general, it seems that participation falls victim to the social climate we are living through today. In fact, the case examined confirms a widespread orientation, on the part of a significant number of the citizens, to live public affairs in a detached way, a tendency to not mobilize unless they are directly affected by an issue. Many times, during the interviews, a reference was made to the fact that

participation is negatively affected by the situation we are experiencing. As the literature has shown, one of the features that characterizes Western societies today is a widespread tendency to individualism. This brings about a general lack of interest in public affairs and a turning to the private sphere, that is favored also by a lifestyle, very focused on the needs of the individual or his inner circle, very oriented to activities carried out in solitude and unwilling to live the common areas, such as for example the square. In terms of will to participate to public affairs, this means a general attitude to mobilize only if personal interests come into play.

> well, let's say the emotions play an enormous role, the emotions, so to speak, deriving from the Nimby effect, but it is only the initial flash in the pan, it's like when there are the fireworks, the first starts and you don't see it! So, that is there is the big bang which maybe calls people in because one doesn't know what is it, then in the long term you see that only those who are interested stay. And unfortunately here, there is very little sensitivity, there is, let's say, deference, the fear of disturbing the leader, and an egoism, that is the crisis of the society, that it is economic but, in my opinion, on a world's scale it is an ethical crisis, and its outcomes, you see them on the local level also on these aspects here: opportunism and uncaring attitude "well, I've got my house, my pension, my safe job, my satellite dish, my mobile phone, Sky, etc., etc.: I'm all right Jack!". In my opinion we went back not so much to the Italy of the feudal system, the Italy of the Middle ages, of the castles, but instead of having various houses now they have the one house, with the car, and the kitchen, and the garden… therefore we went back to being one family, or a minimal group which has a castle (Local Committee_2)

> not many people want to take an interest in public affairs, which is not connected so much with alienation etc., the people participate if they are directly concerned, if they haven't got a true and direct interest, let's say are not inclined towards this sense of participation, which is more felt in the smaller communities, where there is an identity, a stronger feeling of belonging, and a lot less in the wider communities, such as in Cervignano. The same thing organized in Strassoldo would have attracted a lot of people, but in Cervignano a lot fewer. This is a problem I believe now is found almost everywhere and goes a bit against this idea of the participation of the citizens. I can say that unfortunately it is very difficult to manage to involve the citizens, to make them participate in general, eh?! I speak in general, we could also speak of when we organize a cultural initiative or an educational one, meaning that it is hard to get the people out of their houses and make them come and take part in an evening which is dedicated to a theme of public interest or cultural interest etc, this is always true. The Tav question was definitely an important issue but probably it didn't interest the people that much (Public Administration_5)

The sentiment just described in some way feeds the tendency to interpret the possible reactions of the population in terms of Nimby. In particular, the degree to

which the sense of belonging to the territory (intended in a broad sense, with reference to the social, historical, environmental, landscape aspects) manifests itself in the community, influences the propensity of the population to mobilize and seems to discourage the government from the application of procedures for widening the decision-making processes. Some respondents emphasize this aspect as follows:

> other solutions appear absolutely demagogic... in this area they don't find the right soil, the social background, to be like Val Susa or something else. It is out of place indeed because there is no identity of the territory here and not even the same desire to protect it, as the Valsusini (the people from Val di Susa, Author's note) have. Here it is much easier to hear "How much are you ready to cough up for my house, and then we can settle things", etc. (Local Committee_4)

> And here I would make an aside, because, let's say, I know a bit about the Val Susa and I had many contacts at various levels, with people from the movement, with administrators, with people in charge, let's say, from different points of view… However, there are different visions and what is different from here, is an important component, which probably depends on cultural and historical reasons, because the Val di Susa is a secluded place, and therefore the relationships are closer, there is higher sensitivity to the issue of the territory etc., etc. but anyway there is a very large sector of people who are able to round out the extremes – and it is certain that the people are very, very different one from another. Here we have people who in the past got involved, and a lot less, the wide majority are not politically engaged, so that in the committees, only very few people are registered or connected to a political party, so the "common" people are the majority, however there is a strong constituent, especially in Udine and less so in Trieste, from social centres (groups of very politically active squatters, *Author's note*)… So in Friuli Venezia Giulia there is not, as such, an organization with a strong base able to pull the people together as happens in Val di Susa. I always say that in Val Susa they have an organization like a sovereign state, and this is something impressive! I agree there are many people, but there they range from the social centre types to the "peace bearers for the valley" group, which is a Catholic group, religious, which has a priest too, and so there is a range from the atheist to the super religious, which is a very wide span, and they are all in the group, and they all work together, because there is this hard core who says "let's do it in this way" and it manages to get things going... Here instead, partly because of the numbers, but not only for this… we are working in a divided way, so one goes one way and the other goes the other way (Local Committee_2)

Moreover, in the course of the Venice-Trieste high speed railway affaire, some actors have taken positions that recall the interpretations of the Nimby syndrome as the product of an excessive, almost irrational sense of territorial attachment, being very attentive to the vicissitudes that strictly affected their municipality and not

very interested in assessing the possible impacts of the infrastructure elsewhere. An interviewee says at this purpose:

> then I had posed this question, which was, moreover absolutely ignored at the time because all the Mayors, almost without exception, I don't remember a position which emerged in any way, they were concerned because of the route of the Tav and the impact on their territory, but just on THEIR territory, so nobody gave a damn about what would happen just a kilometer away (Local Committee_3)

Finally, an interesting peculiarity of this case study in terms of propensity to be open to hear others' point of views is related to the Val di Susa experience. In fact, having pointed out the fragility of the relationship between the institutions and the citizens, the Val di Susa case has fueled concerns about a possible degeneration of the situation also in Veneto and Friuli Venezia Giulia. This has been translated into attempts to de-politicize the issue, in the sense that in order not to create alarmism and resistance, the institutional representatives have often tried to maintain the issue within protected circles, giving information in a careful, sometimes perhaps cryptic way, and with consequences that will be further explored in the following pages. An interviewee says:

> yes definitely! There isn't the faintest doubt that they are influenced by the Val di Susa affair! Because if you want you could also put it in inverted commas in your thesis, the great majority of the councilors and of the aldermen know nothing about Tav and therefore to justify a favorable position which comes down from the top they invoke those episodes which they call "the violence in Val di Susa" (Local Committee_1)

The attitude to consider the other's perspectives on a topic presupposes the existence of a difference. As we shall see in the next section, in the context of a technoscientific controversy, heterogeneity manifests itself not only in relation to the actors involved but also affects other components of the same, potentially introducing elements of instability which, if not properly managed, undermine the possibility to realize participatory procedures.

5.5. Heterogeneity

When dealing with a controversy, heterogeneity may refer to the variety of actors involved, and thus to their different interests, motivations, worldviews. But it may also refer to the issue at the center of the controversy, meaning that there could be different dimensions of the issue which have arisen from time to time. On the

one hand, heterogeneity is a source of richness, since it allows one to shed light on the different, sometimes latent frames within which the issue can be embedded and that are, a possible source of misunderstandings. Moreover, to recognize and try to value the heterogeneity that characterizes a controversy is the prerequisite for making new knowledge appear. On the other hand, if ungoverned, heterogeneity can feed uncertainty and negatively affect the decision-making processes. The inner variety that characterizes the groups involved in the controversy, can also mean the co-existence of different interpretations within the same group thus being a possible source of misunderstandings for the actors external to the group who cannot clearly position the group within the alliances around the high speed railway. Thus, this section will explore how the idea of heterogeneity applies to the case of the high speed railway Venice-Trieste according to two elements: the actors that intervene, by saying or doing something, in the controversy, the aspects of the Tav Venice-Trieste affair that are discussed by the actors involved and the definitions of participation that have emerged from the collected data.

Dealing with heterogeneity in the context of the case under examination leads consider the territorial dimension. In fact, this railway line is part of a European project for the improvement of transport infrastructure, which thus involves several small routes, both Italian and foreign. The Venice-Trieste route itself affects two different Regions, five different Provinces, and of course a number of municipalities. The territorial dimension influences both the actors who have a say or do something on the subject of the high speed railway and the aspects of the issue that are discussed or made relevant.

First of all, as it was said when presenting the case study, in Italy, the debate on the high speed/high capacity railways has been dominated by the case of the Val di Susa (Piedmont). The collected data confirm this predominance. In fact, the map created using Navicrawler (Figure 18) shows that the "Tav" issue is present online primarily with reference to the Piedmont case (pink) and mainly through local committees' websites and some blogs. The websites mainly dedicated to the Venice-Trieste case (in blue) are in a marginal position and are connected almost exclusively with each other, forming a sort of auto-referential cluster. The online presence of Trentino-Alto Adige is instead quite large (in red), and it is mainly due to the websites of the local committees as well, or dedicated to the protection of the environment.
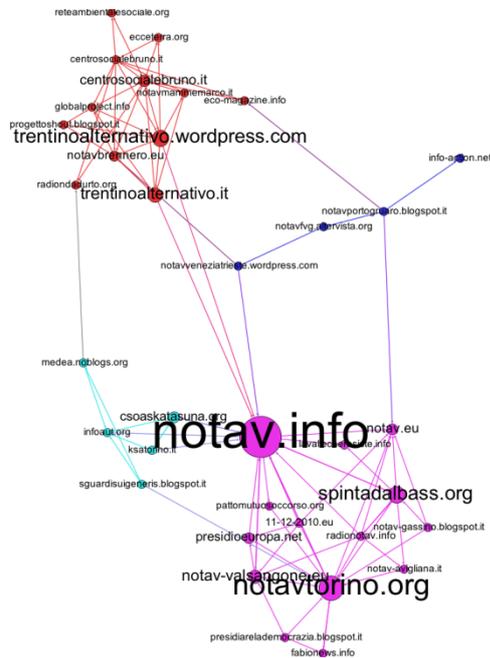
Figure 18 - Map of website with a permanent section on the Tav

Also the analysis on the contents of the Facebook posts highlights the relevance of the Val di Susa experience in the definition of the issue. Among the posts that were possible to code according to the route they were referred to, a large part was about the Piedmont case. It is the case, in particular of the "No Tav FVG" group, where the posts coded as "Turin-Lyon", thus concerning the infrastructure itself or the protests against its construction, represent 47% of the total posts and exceed those related to the local route (Table 3).

| | Facebook Group | | | |
| | No Tav Basso Piave | | No Tav FVG | |
Line	No	%	No	%
Venice-Triest	144	64	157	35,7
Turin-Lyon	56	24,9	207	47
Tav in general	20	8,9	69	15,7
Tav Lombardia	1	0,4		
Tav Bologna			1	0,2
Lisbon-Kiev	1	0,4		
Tav Firenze			1	0,2
HSR Spagna			2	0,5
HSR Germany	1	0,4	2	0,5

HSR China	1	0,4		
HSR UK	1	0,4		
HSR Francia			1	0,2
Total	**225**	**100**	**440**	**100**

Table 3 - Facebook Groups. Line

Right from the word cloud made (Figure 19), it is clear that, while the reference to Val di Susa is present in both groups, the group of Friuli Venezia Giulia is the one in which the element occurs predominantly. Beyond the purely geographical references, there are also other words clearly connected, for those who know the story of the vicissitudes of Piedmont (e.g. "*presidio*" (barricades), "*baita*" (hut), "*reti*" (nets)).

No Tav Basso Piave" group   "No Tav FVG" group
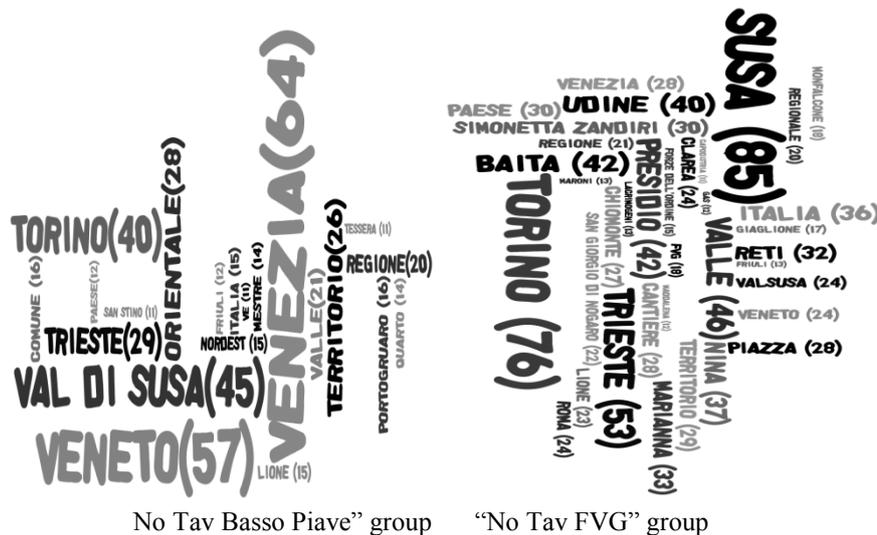
Figure 19 - Facebook groups. Geography

If we go more in depth with the analysis of the aspects of the issue that have been addressed in the different arenas that it was possible to explore according to this theme (Facebook and "Il Gazzettino"), we see that according the texts of the posts collected from the Facebook groups (Figure 20) there is a difference in the topics addressed by the two groups. Inside the "No Tav Basso Piave" group, the high speed railway is mainly discussed in technical terms, and in particular, in terms of "route". In fact, while in the Friuli Venezia Giulia Region the idea of making the new rails run parallel to the route of the motorway "A4 – Turin-Trieste" has prevailed, almost immediately, in the Veneto Region, the story has been

characterized by the difficulty of reaching an agreement with respect to the location of the railway. As said, so far, three options have been discussed:

- the coastal route;
- the route alongside the existing railway;
- the route along the motorway.

Obviously the prevalence of either solution resulted, over time, in changes in the alliances for or against the project, with the consequent inclusion and exclusion of some actors, depending on the project.

Other keywords that emerge, but with less importance, in the "No Tav Basso Piave" group are linked to the political and economic spheres: *"politica"* (politics), *"politici"* (politicians) *"future"* (future). Within the group "No Tav FVG" instead the economic dimension dominates: *"euro"* (euros), *"soldi"* (money), *"milioni"* (millions), *"miliardi"* (billions), *"costi"* (costs), *"economica"* (economic). Also in this case the political side of the issue as well as elements related to the technical dimension (*"tracciato"* (route), *"ambientale"* (environnmetal) *"rail line"* (tratta) emerge).

No Tav Basso Piave group   "No Tav FVG" group

Figure 20 - Facebook groups. Issue(s)

Moreover, according to the contents of the posts (Table 4) that have been possible to code according to their general topic, the two Facebook groups appear different with reference to the core of the discussion. In the "No Tav Basso Piave"

group, it is mainly a matter of protests (in the form of information about the carrying out of protests/events/initiatives or in the form of reports of events/protests/initiatives) against the infrastructure and details about the railway project (mainly its route and political aspects such as Municipal resolutions or official declarations made by the actors involved). In the "No Tav FVG" group the posts are mainly about protests/events/initiatives and demonstration of feelings of group belonging or attempts to strengthen the group cohesion.

	Facebook Group			
	No Tav Basso Piave		No Tav FVG	
	No.	%	No.	%
Information on the functioning of the FB group	5	2,2	32	6,6
Group/commitee: fellow feeling; sympathy	17	7,4	90	18,5
High speed railway details	143	61,9	69	14,2
Protest/event	66	28,6	295	60,7
Total	**231**	**100**	**486**	**100,0**

Table 4 - Facebook Groups. Topic

The posts that received the greatest number of likes and comments are in line with these data (Tab.5).

	Facebook Group	
	No Tav Basso Piave	No Tav FVG
Topic	**No.likes**	**No.likes**
group/committee: group feeling; solidarity		4
protest/event	3	7
HSR	6	1
Other	1	3

Table 5 - Facebook Groups. Most liked posts

On the other side, the articles from the daily press that have been analyzed show a predominance of the technical aspects of the issue (37%) (e.g. route, alternatives to the high speed railway, harmonization/integration with other infrastructures, such as the Baltic-Adriatic Corridor, the Ports of Venice and Trieste, the enhancement of the motorway), followed by political aspects (19%) (e.g. competitiveness, appointment of Commissioner of the Government for the Venice-Trieste railway line, resolutions) and economic issues (45%) (e.g. costs and funding) (Table 6).

	No.	%
Enviromental impact/risk	22	8
Trasport/technical problems	6	2
Impact on the territory/overbuilding/suffering	7	2
Problems of representation/participation and democracy	32	11
Funds/economic issues	45	16
Transparency/completeness of the information	13	4
Technical details	107	37
Informative events	3	1
Political aspects	57	19
Total	**292**	**100**

Table 6 - Daily newspaper. Issue (s)

The interviews too show the number of definitions the issue can have and the way in which each of them has interested and mobilized different actors around the high speed railway construction. It should however be noted that the lack of a project to be considered definitive (for the Veneto Region part) and the difficulty of having a clear vision of economic and social development scenarios that justify the construction of this infrastructure have represented the main elements around which the controversy has developed and according to which actors have mobilized. Setting priorities, two interviewees say:

> the main problem for us was to understand the usefulness of this intervention, the environmental consequences were a subsequent act. Therefore we were interested in dealing with people who would explain to us the need for this railway and how to build it (Public Administration_1)

> because as long as we don't answer the cost-benefits question of the Tav, the doubt about the lack of sustainability and that of a public work inspired by other motives stays, and therefore we want to avoid the possibility to end up in these situations. If instead of saying "ladies and gentlemen, it is necessary, we do it!" the citizens are ready to make sacrifices

even of their assets so long as they understand that there is greater asset…This is something I firmly believe. (Public Administration_3)

Moreover, in the beginning, the issue circulated only through unofficial channels, and mainly through the declarations made by politicians or through the daily press: this has undoubtedly affected the public acceptability of the infrastructure and the possibility for the actors involved to find information and organize their positions. An interviewee puts it in these words:

at that time, we are talking about October-November 2010, the problem was to contextualize, I mean to understand what we wanted to do between Venice and Trieste, because later I learnt that in Friuli Venezia Giulia there was a movement which had already developed, they already had documentation, there were already indications, they already had everything, while here there was effectively nothing, we knew nothing. There were only these resolutions of the regional government, one I believe dated 2005, one of 2006 where this project was included in the Legge Obiettivo (Italian law relating to this kind of infrastructure projects, *Author's note)*, Italferr (a company which is part of the RFI group, *Author's note*) was entrusted with the work but there was nothing official, a lot of rumors, this was called the coastal route, with stops for the beaches and the like, but because my way of doing things was always to base actions on documents, that is on certainties and not on rumors, not on the press articles, the frustration at the beginning was to be able to get information, because the process, at least here in Veneto, was not transparent and me too, in spite of being a local councilor, I had difficulties in finding the true and real documentation. (Local Committee_3)

The High speed railway entails, of course, environmental aspects. The route crosses areas under protection or characterized by environmental or landscape peculiarities. According to the WWF, 33 areas recognized as Sites of Community Importance, Zones of Special Protection or Important Bird Areas are affected by the construction of the railway, such as the Karst Plateau (Carso), the Park of the River Sile[23] or the Venetian Lagoon.

therefore I want to say, let's talk about the old project, because we always need to distinguish between old and new, but that old project, which they presented at the beginning and for which now they presented the VIA (environmental impact analysis, *Author's note*)-from the point of view of the impact on the territory, here it is devastating! Just think, in Mestre it goes through a tunnel in the area of Zuccarello, which is an area a bit outside the

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[23] The Karst Plateau is a chalcky area between the Julian Alps and the Adriatic Sea. It characterizes the Gorizia and Trieste Provinces. This kind of territory is rich in caves and includes also the Duino Cliffs Natural Reserve. Founded in 1991, the Natural Park of the River Sile covers 11 municipalities within the Provinces of Padua, Treviso and Venice and is characterized by water springs and copious woods

borough, San Liberale is a village and it would come up through the fields, here near Quarto d'Altino and it would do a lot of harm to all the valuable assets of this borough. (Local Committee_3)

it is evident how the impact would be very serious for our territory, which has already been damaged by the infrastructures in a huge way as it is cut in half by the motorway intersections of the A4, the railway line, the Triestina road, and then now there is also a ring road which is being constructed as a work complimentary to the by-pass, therefore there is unfortunately a lot of damage here already and the village is aware that it is being seriously threatened, then the people would like to understand the rest too (Public Administration_3)

In addition, as this last interviewee notes, many of the areas affected by the construction of the railway were affected or are still involved in the construction of other road infrastructure projects. Moreover, a wide part of the territory affected by its transit is made up of fields used for farming. In the debate about the Venice-Trieste line the environmental dimension has often been blurred by other aspects of the issue. Anyway, it has been an important element of *interessment* and *enrollment*, especially within the local population, and it has had a fundamental role, for example, for the inclusion of the local farmers, a group generally reluctant to be involved in the issues related to the territory, in the network of alliances built around the high speed railway. To build alliances in order to make one's arguments relevant in the discussion is not always a painless process: as the following words indicate, it can also imply some sacrifices in terms of identity:

we never liked the acronym Tav, so we always fought against it, the issue in that phase was to find alliances to sustain a fight that at that point was a very, very, I repeat very political one, therefore to be able to break down the walls of resistance and to change the system of alliances, which in the end, we can say was successfully accomplished, we had to give up something on the grounds of identity but then it was fundamental to reach the objective which we had and that was to block that project, manage to block that railway and create a vast alliance, the largest possible in a way that on the other side, and I mean especially the other side, couldn't have a chance to label us as " these are the ones who don't want anything, and with these we do not talk" (Local Committee_4)

The technical aspects of the infrastructure are mainly debated in terms of the route. The fact that the definition of the high speed railway route is not unique and does not have a precise, definitive definition over time, decomposes and reforms the alliances around the infrastructure. It happens, for example, that some Municipalities take positions for or against it depending on whether they are

affected or not by the route, citizens too participate with more or less conviction and diligence depending on whether they are directly affected by the route:

> if you have been reading the papers about Tav, even recent ones, you have seen that something is changing: there is the alternative path, the path with very different modalities of realization, with a very different time scale, so that some results have been obtained as local bodies, now we shall see of which end we will die (Public Administration_1)

The same word "high speed railway" has been and is still abused, used to indicate many forms under which the railway can be constructed: the high speed railway according to the European Commission definition, the enhancement of the existing line, a railway that is both dedicated to freights and to people. All of these options are different one from the other according to the efforts needed for their construction and according to the impacts they bring about. These definitions are those which the actors may have in mind when they discuss the issue and all of them have appeared periodically in the affair. An interviewee summarizes it as follows:

> actually in effect this issue of the Tav, which is a very complex one and also very technical too, which improperly is called Tav in my opinion because effectively we should be talking about modernization, strengthening the railway, this is the aim, that is a strengthening, a modernization of the railway line that then is simplified in Tav. (Public Administration_6)

The economic side of the issue has its relevance especially since the beginning of the economic crisis. First, as a consequence of this new situation, many of the States involved in the construction of the railway (Spain, Portugal, Slovenia) have changed their priorities and have stopped the implementation of the project. Second, the impacts of construction of the railway and the ways in which it is planned and constructed have been a source of conflicts. Many economic arguments have been advanced:

- The Tav Venice-Trieste is a matter of the way public money should be spent:

> then bear in mind that this project is not a provisional project, it is instead a very very detailed one They spent 13 million on that project, it is scandalous in my opinion because it is 13 million thrown away; everybody is against it! (Local Committee_3)

it was interesting to learn how 90% of the total cost of the work feeds our politicians, the mafias, all the criminal organizations, while only 10% of the whole costs goes effectively to pay our enterprises and the costs of the works themselves. So we pay 90% for something which should not even exist! (Local Committee_1)

- it is a matter of ensuring competitiveness to Italy and of giving different interpretation to the needs of the population:

it is clear that it was necessary to base ourselves on documentation but in reality this discussion was immediately fossilized on the problem of path, while instead I had already read something by Cicconi, that famous book, the only work fairly complete on the Tav, which was entitled "Overwhelmed by high voracity"[24] where there were the contributions of all the major technicians, from the financial, technical, rail and transport points of view […] and I had already said it at the time, even a layman knows it, the structure of the rail demand, that is, we are in the country of commuters, of the hundreds of towns and the type of demand, the customers, is not to get quickly to Trieste, it is about that 90% of the people who travel from Portogruaro towards Venice or from Portogruaro towards Trieste, and so they only travel for a small section of the route. (Local Committee_3)

and as far as the relationship with RFI is concerned I am always very critical not just because this region is badly serviced and badly treated, the trains which we can use for Trieste are fewer and fewer and worsened in terms of timetable in quite a dramatic way (Public Administration_5)

- It is a matter of the increase of the costs due to the lengthening of the time for giving, for example, documents or for making formal statement:

among the rest, for some aspects, I'd say that it is incredible how in spite of almost all the local municipalities expressing their opinion against the coastal route, and the regional council of Veneto voting against it too, the province of Venice as well, still the Via procedure is going on, we even represented it claiming the defect of form, but this lengthening of the route objectively implies more costs, which no longer appear reasonable, also as it was overwhelmingly rejected, as Mainardi too admitted (Public Administration_3)

- it is a matter of funding of public works, and especially of supporting the construction of a public work through project financing, and related to this point it is a matter of the high risk of corruption and the infiltration of the Mafia in the contracts. This is an aspect of the issue that is the focus of the opinions held in particular by the local committees.

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[24] My translation: "Travolti dall'Alta voracità"

> I am a No Tav militant because fighting against Tav is fighting against corruption, the mafia, the waste of public money, against corrupt politicians, against a rotten society…inside the fight against Tav there are all these things…(Local Committee_1)

> it is clear that this was an affair of dozens of millions of the old liras for a handful of people in the whole of Italy, that is we don't consider if the problem it right or wrong, obviously, this is the point! Then all in all it goes further on, there are also investigations, there is a bit of everything in it, there is organized crime, just to understand. (Local Committee_3)

But the issue is intended also in political terms. And this is the more controversial side. In this case the construction of the high speed railway is discussed in terms of the interconnections between different institutional levels, in terms of revenue income assigned to the municipalities and to the persons whose houses or fields will be affected by the transit of the high speed railway:

> Therefore, if the hypothesis is there, it is necessary to put it at the disposal of all the subjects involved. Also because maybe we made a mistake, maybe the people wanted it there, but, if this had been a route built and wanted by the people, by the people themselves, probably there would have been no such need. This is what is typically Italian, and even more, we call it deliberately the "Chisso method" (Chisso is a member of the Regional Council of Veneto, *Author's note*), it has to be kept bottled under the cap until the last minute then finally come out when the territory has got nothing else left than the big hysterical reaction and from a legal point of view there is nothing left to defend yourself. In spite of the law providing the proper route - and this was the fight indeed (Local Committee_4)

Last but not least, the controversy goes beyond the specific case of the high speed railway and embraces a range of issues much more abstract and general, such as, for example, different, sometimes conflicting visions of the economic development, both with respect to the local dimension and with respect to the general situation of Italy, as the following words explain:

> so now we enter the field of the development, where one of the many arguments is: "The Tav is built because it brings development", then you ask "what does it mean: it bring development?" "well, the enterprises build etc…" then usually there are a few enterprises, big enterprises, which sub-contract abroad, so therefore if I have to do something that brings development but I don't know exactly what this development is here, rather I had the impression that it brings something different, so we should try to define when we say "it brings development" and then we see what type of development it brings, we would understand that it doesn't bring any development, therefore it might finally be opportune to stick the TIR (articulated trucks, *Author's note*) on two rails. (Lay Public_1)

With reference to the actors involved, the relevance of the territorial dimension is clear if we look at the graphs obtained by using Netvizz's data (Figures 21 and 22). The group "No Tav FVG" appears split into two main subgroups: the green-red on the right is mainly made up of people from the Piedmont region, while the blue-violet on the left is mainly of people from the territories directly affected by the construction of the Venice-Trieste railway line. The connection between the two subgroups is an activist from Turin.

The group "No Tav Basso Piave" appears to be more fragmented and the Piedmont one seems to be less large. In fact, the sub-group referring to Piedmont is the upper one (in dark violet), while the rest of the graph relates to territories to some extent concerned with the Venice-Trieste railway line. In more detail, we can identify three main groups: the red at the bottom is made up mainly of people from the Pordenone area; the pink, the green and the violet mainly refer to various areas of the Venice Province.

The five members of the "No Tav FVG group" who, according to Netvizz, turn out to have the highest number of connections are all from Piedmont. The most connected person has 296 connections. While in this case, the five members with the highest betweenness centrality measure are in three cases from Veneto or the Friuli Venezia Giulia Regions, and in the remaining two, from Piedmont.

Concerning the "No Tav Basso Piave group", four members out of five with the highest number of connections are from the territories directly affected by the Venice-Trieste railway line. The last one is from Piedmont. In this case the most connected person has 70 connections. On the other hand, the five members with the highest betweenness centrality measure are, also in this case, three from Veneto or the Friuli Venezia Giulia Regions, and the remaining two from Piedmont.
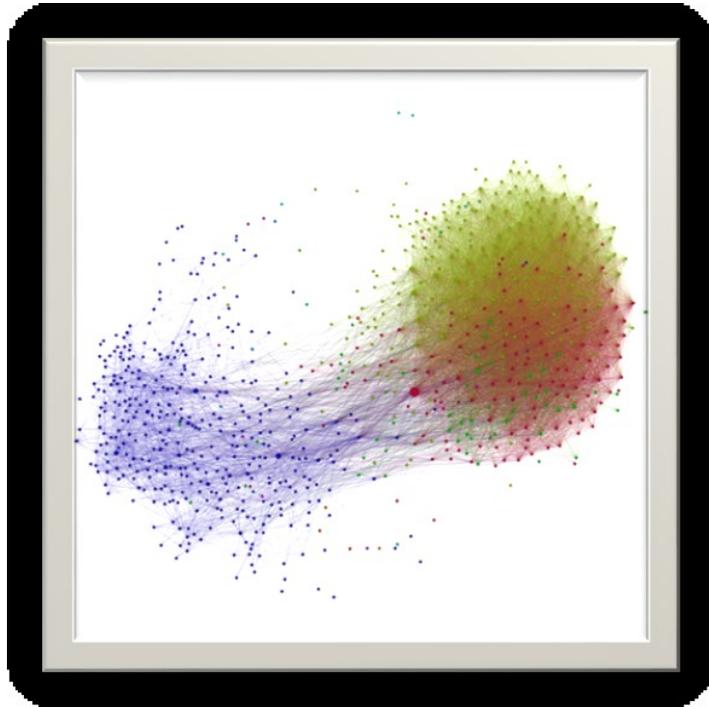
Figure 21 - Internal fragmentation of the Facebook group "No Tav FVG" from Netvizz

Figure 22 - Internal fragmentation of the Facebook group "No Tav Basso Piave" from Netvizz

It is then interesting to note that of the five most active members of the Facebook group "No Tav FVG", three are from Piedmont; while in the other group, two of the most active members live outside of the Veneto and Friuli Venezia Giulia region and one of them is from Piedmont. The Val di Susa experience has represented an important point of reference for the organization of the mobilization initiatives by the local committees: the core documents about the high speed railway affair in Italy have been produced and delivered by the activists from Val di Susa; several of the experts who have spoken for the Venice-Trieste railway line are the same that had already spoken about the Turin-Lyon railway line; people from Val di Susa give advice and support to the local initiatives. Two of the interviewed activists say:

> Val Susa was our school, also because they started many years ago…(Local Committee_2)

> the fact that there had been such an extended fight in Val Susa was an advantage to us, as we already found a series of studies, bibliographies and documents which were the result of that fight… (Local Committee_3)

Looking more in detail at the posts on Facebook, it is possible to see how much people from Veneto and Friuli Venezia Giulia participate emotionally and physically in the Val di Susa's protest. In the "No Tav Basso Piave" group, 54% of the posts dedicated to the Turin-Lyon railway line are about a protest taking place there or are aimed at creating a feeling of group belonging; the same kinds of posts are 90% in the "No Tav FVG" group (Tables 7 and 8) (e.g. *"Solidarity with the Val di Susa"*, *"We are with you and we will be on your side – No Tav is not just a protest movement, there is a vision of cultural change which unites us"*) and viceversa, the posts show how much the Piedmont activists support the local No Tav committees ("*Guys, come on! From Val di Susa: do not give up! Widen the consensus! It takes time, but once they understand they won't change their minds anymore!"*).

	Venice-Trieste		Turin-Lyon		Tav in general		Tav Lombardy		Lisbon-Madrid		HSR China		HSR Germany		HSR UK		TOTAL
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
FB	4	3	0		0		0		0		0		0		1	100	5
group/committee: group feeling; solidarity	6	4	7	13	4	20	0	0	0	0	0	0	0	0	0	0	17
HSR	96	67	26	46	14	70	1	100	1	100	1	100	1	100	0	0	140
protest/event	38	26	23	41	2	10	0	0	0	0	0	0	0	0	0	0	63
TOTAL	144	100	56	100	20	100	1	100	1	100	1	100	1	100	1	100	225

Table 7 - Facebook Group "No Tav Basso Piave". Topic per route

	Venice-Trieste		Turin-Lyon		Tav in general		HSR Germany		HSR Spain		Tav Florence		HSR France		Tav Bologna		TOTAL
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
FB	20	13	0	0	4	6	0	0	0	0	0	0	0	0	0	0	24
group/committee: group feeling; solidarity	9	6	40	19	23	33	0	0	1	50	1	100	1	100	1	100	76
HSR	15	10	20	10	20	29	2	100	0	0	0	0	0	0	0	0	57
protest/event	112	72	147	71	22	32	0	0	1	50	0	0	0	0	0	0	282
TOTAL	156	100	207	100	69	100	2	100	2	100	1	100	1	100	1	100	439

Table 8 - Facebook Group "No Tav FVG". Topic per route

The data collected through the daily newspaper show that, in this case, the debate takes place especially at the local level (Table 9). Among the coded actors who say or do something concerning the construction of the high speed railway (334), there is a clear predominance (more than half of the players coded) of actors belonging to the local public administrations (the Governors of the two Regions, the Regional Councillors for Mobility and Infrastructures and the Mayors of some of the Municipalities involved). There is also a relevant percentage of representatives of political parties (6.9%), and representatives of European organizations (mainly members of the European Parliament and among them, mainly the Italian representatives (5.4%)).

	No.	%
Internal to PA	189	56,6
Civil society	35	10,5
Internal to committees	25	7,5
Internal to a political party	23	6,9
Internal to European bodies	18	5,4
Internal industry/enterprise	17	5,1
Internal RFI	13	3,9
External/called by committees	3	0,9
External/called by PA	3	0,9
University/research	3	0,9
Government	3	0,9
External/called by RFI	1	0,3
Internal to media	1	0,3
Total	**334**	**100,0**

Table 9 - Local daily newspaper. Actors

Also by analyzing the affiliations of the actors mentioned in the posts on Facebook (Table 10), there is a predominance of the political sphere (72.3% and 40.5% of the total encoded actors). It should however be recognized that the percentage of actors belonging to the civil society is however larger (nearly 20% and 40%) than the one shown by the daily press. Thus, it should be said that as it has been already shown in the section dedicated to the media arenas, it is undisputable that the internet offers a wider range of possibilities for committees to express their positions and arguments than the traditional media, that seem instead more closed towards them. If we read this together with the fact that, as emerged

from the interviews and as it has already been mentioned above, institutional websites have begun in recent times to open the topic and that the same debate has then developed, then it becomes clear that if one surfs the internet to find information about the high speed railway, he will probably end up on websites against its construction. This is in line with what emerged from the Navicrawler Map (Figure 18), whose starting point has been the first website shown when entering the keyword "Tav Venezia Trieste" in the Google Search Engine. However, while reading this data, it has to be borne in mind that the institutional websites have begun to treat the topic in more detail in recent times and that the same debate has developed in lately, thus it is not possible to rule out that if we reconstruct the map in a short time, the results may be different.

	Facebook group			
	No Tav Basso Piave		No Tav FVG	
	No.	%	No.	%
Local Municipality	13	17,1	6	5,2
Other Municipality	2	2,6	2	1,7
Local Province	3	3,9		
Regional Government	12	15,8	4	3,4
Other Regional Government			1	0,9
Italian government	7	9,2	13	11,2
Other National government	1	1,3		
European body	10	13,2	18	15,5
Political party	8	10,5	3	2,6
Civil society	15	19,7	43	37,1
National Railway company			3	2,6
Foreign Railway company			1	0,9
University	2	2,6	5	4,3
Research			2	1,7
Enterprise			4	3,4
Media	2	2,6	4	3,4
Police	1	1,3	1	0,9
Law			6	5,2
Total	**76**	**100**	**116**	**100**

Table 10 - Facebook groups. Actors

The above mentioned data, show how the already cited territorial dimension can be articulated also in relation to the different levels of government involved in the controversy. In the course of the events, several times, on different issues, the various institutional levels involved have come into conflict. This has happened, for example, concerning the different speed and degree of completeness with which information has been conveyed and also concerning the difficulty of accessing it. This has created a problem for the municipalities involved, both in terms of the organization of the expertise to refer to in order to evaluate the project, and in terms of the possibilities to interact with the citizens on the subject. Some of the administrators interviewed describe the problem in these terms:

> [*about the technical expertise in governing*] in my opinion there are serious flaws, because the technicians who should communicate with the administrations are always very cryptical, they provide as little information as possible and in my opinion are doing wrong, because in my opinion in the end, being clear always pays, in a way, don't you think? And for us politicians, as we are not technicians and can work on the information as it is provided, it is increasingly difficult to make the citizens understand the sense of one position instead of another one (Public Administration_1)

> The story of this railway, which should join Lyon to Kiev, is a badly structured one, so I believe that Italy is showing itself up, so that at the beginning there is this management of this railway line which is indeed badly structured: there are no clear points, the transport Ministry should have clearer ideas and it hasn't got them, so in my opinion it was born bad…(Public Administration_5)

From the point of view of the citizens, this reference to extra-territorial actors has fed the perception of the infrastructure as an imposition, as a reduction of the right to decide on the future of their own land. Moreover, some of the same actors involved in the controversy, such as the European Union and the Commissioner of the Government for the Venice-Trieste railway line, appeared at times as "means" to close the debate. An interviewee says at this purpose:

> among the rest, a few days ago the alderman of the environment issued a press release where he explained that he is in favor of the current line being made four times bigger, and I'm tempted to say, in a complete Mainardi style, in the sense: first I decide, I approve and then I'm gonna explain why. That is. once the games are done, I'll tell you why. Therefore as a consequence this means that the commissioner is useful to various politicians, especially those who are in favor as they always have the chance of saying "well, it is the extraordinary commissioner who decides, we count up to a point". And with this excuse they involve nobody! (Local Committee_1)

Heterogeneity was the last of keywords extracted from the analyzed literature and that we set out to investigate in the case of the high speed railway Venice-Trieste. Based on the findings of the present and previous sections, in the concluding chapter we will try to reconstruct the meaning that the concept of participation assumed in the studied case, trying to derive, if possible, observations of a more general nature.

6

Conclusion

6.1. An attempt to assemble the pieces of a jigsaw called participation

The methodological approach that has been employed and the inclusion of part of the conceptual framework of the studies on technoscientific controversies has proved how dealing with the issue of public participation requires a multi-faceted analysis both when the theme is approached from a theoretical point of view, and when it is approached from a practical point of view, studying the methods and procedures through which it has already been realized or trying to identify the most effective ways to give it a practical interpretation.

At the end of this review it emerges that the idea of participation in a techno-scientific controversy can be approached both as a matter of relational dynamics and as a matter of knowledge construction processes.

The adoption of a perspective that put the controversial issue instead of participation at the center of the data collection and analysis made it possible to show that there are slightly different visions of the meaning of participation and of the impacts and outcomes of the participatory initiatives undertaken in the course of the Tav affair, among the various actors involved in the controversy, and in particular between institutional actors and committees. That is why, in my opinion, it makes sense to talk about "controversial" participation.

With regard to the Internet, the idea was to try capture the potential contribution of the Internet to the achievement of participation, by shifting the gaze from

the implementation of procedures, to the visualisation and framing of emergent political
processes already underway on the Web (Marres, 2004, p.27)

The first thing that clearly emerges from the study is that a crucial premise for
the fulfillment of participation in the practice is therefore the acknowledgement of
the diversity. This means first, the acknowledgement that other points of view
beside our own may exists, secondly, the willingness to some extent to question our
own identity, our own beliefs in the name of a shared project (Pellizzoni, 2005b).
When the field of interest is that of a technoscientific controversy, then the
diversity is essential: by definition the controversial object is the result of a series
of dynamic adjustments, which alternatively involve processes of confrontation,
mediation and conflict within networks of actors, each one trying to impose, in a
sense, its diversity (Callon, 1986; Latour, 1998).

The more or less definitive predominance of a perspective on the controversial
project depends on the ability of the alliance of actors that supports it to manage
key resources. In the Tav Venice-Trieste case one of the resources that comes out
to be essential to strengthen a perspective against the others is the degree of control
on the information flow. To be able (or not) to access information easily and in
time, inevitably leads to the rise of asymmetries of power in the network of
alliances formed around the controversial object.

Information and in particular the ways through which it circulates among the
different actors involved in the controversy can therefore take on a dual role: on the
one hand, it helps to close the debate, excluding, when it is not put into circulation,
some of the positions in the game; on the other hand, when it is difficult to access,
is sealed or contradictory, it becomes itself one of the elements of discussion,
adding instability to the network.

In the case that has been studied, the control of the information flow has been
closely related to the ability to deal with the complexity of the issue, to the ability
to identify and spread powerful and reliable expertise, to the ability to properly deal
with the media.

These latter seem to play an important role in the articulation of the "geography
of power" in the controversy (Venturini, 2008). Their role can be read in two ways.
They are a powerful means for raising awareness of the issue at stake in the hands
of the different actors involved who, in fact, compete in order to earn a place in the
media arena, control the contents that are channeled through them; to find support
to their view on the project at stake. But they are also, themselves, an actor of the

controversy, whose enrollment can have a significant impact on the dynamics that occur between the alliances for and against the infrastructure.

The existence of a differentiation with respect to the role that each medium can have inside the controversy has emerged clearly in the Tav Venice-Trieste affair. This differentiation is in part due to the operating logic of the media and in part depends on their greater (or lesser) openness to the different actors involved in the controversy. These actors seem to be aware of these dynamics and during the evolution of the debate, they appeal to one or another medium according to the public they hope to interest.

In the examined case, the daily press has turned out to be a central element, being decisive in giving salience to the issue, especially in the early stages of the controversy, therefore contributing to the process of politicization of the issue.

With regard to the internet, the examined case has shown that local governments make use of it, but generally as a tool to inform quickly and in a capillary way their citizens (Formenti 2009; Macaluso, 2007; Mosca, 2009). The institutional presence online appears very fragmented, especially with reference to the highest levels of government, and is closely linked to the individual aptitude and familiarity with the new technologies. In reading these dynamics it must however be borne in mind that the Italian situation is still evolving. With respect to the Tav Venice-Trieste case, for example, it is especially in the last few months that an increasing number of municipalities have dedicated a permanent section of the website to the collection of documents and news on the high speed railway construction. The internet instead, in line with the statements made by other research (for example, Della Porta & Mosca, 2005b), turns out to be effective especially for the committees. On the one side, it performs important functions of coordination and internal organization, by virtue of, in particular, tools such as e-mails and platforms for document sharing. On the other side, the internet has represented for them a setting in which they could give visibility and articulate issues to which the institutions and the traditional media did not give enough space (Marres, 2007, Della Porta & Mosca, 2005b). It is clear that both these uses of the Net (institutional and non-institutional) are still far away from the real accomplishment of the idea of e-participation.

The perspective adopted have allowed us to show that if the empirical research had been carried out by applying a top-down approach, the results would have been poor. The case examined has, to some extent, confirmed the appropriateness of terms such as "evaporation of politics" (Eliasoph, 1998) or "displacement of politics" (Beck, 2000) or "counter-democracy" (Rosanvallon, 2008) for describing

the situation of the contemporary public sphere, according to which the discussion of public affairs often takes place outside the official channels designated to it, and many forms exist through which the civic control and supervision of the power can occur (Rosanvallon, 2008).

Moreover, as it was shown, the encounters between the government and citizens have been implemented predominantly in the form of on-topic municipal councils or public meetings (these latter often organized at the behest of the committees) characterizing themselves as *moments of information* rather than as *moments of true confrontation or deliberation*. In general, the translation of participation into top-down practices comes up against a number of obstacles. First of all, as we have seen, it is affected by the fact that the structure of governance about public works and the general law which rules the broad sector, offers too weak a support for the adoption of participatory practices and imposes on the decisions a timing that is often difficult to reconcile with that required by the organization of participatory practices. Secondly, it is influenced by the existing widespread sense of detachment and indifference to common problems and from the general disaffection with the political institutions. From the point of view of these latter, the perception of this state of affairs becomes often itself on the one hand, a justification to the interpretation of the possible reactions of the population in terms of Nimby or as the expression of a small number of citizens; and on the other hand it contributes to discourage the government from the application of procedures for widening the decision-making processes. From the point of view of committees, it means that the attempts made by institutions are often perceived as merely symbolic, irrelevant to a true willingness to include.

There are of course a number of exceptions, but in general, when committees and administrations take different positions, there is a tendency of the two sides to see their counterpart as an indistinct whole. But, the web-based ethnography that it has been possible to carry out in this research, and in particular the analysis of the Facebook groups has shown for example the existence of a significant variety that concerns the aspects of the issue that are discussed but also the tones of the protest.

The lack of recognition of diversity obviously hinders the possibility to capture the heterogeneity that characterizes the two groups in the reality and nips, the possibility of using diversity in a constructive way, in the bud. In fact, the case study has shown how local committees and associations in general, under certain conditions, can play an important role in the transmission of information and the strengthening of social cohesion: there have been several occasions in which these subjects have put themselves as an element to raise awareness on the topic within

the larger population, or in which they have conveyed contacts and knowledge to the administrators themselves. This seems to be a chance to be further explored in a context of social unease and economic crisis like the one we are experiencing: if properly exploited, these positive forces could prove useful at the level of local governance, also to find solutions that go beyond techno-scientific controversies and involve other dimensions of local governance. Of course, the first step to be made is to manifest the will to intercept them and to find effective means to make them visible and to value them.

The contents of the previous pages were meant to be an attempt to go in this direction. Many questions remain of course open and deserve to be further explored. For example, I think that it could be useful to go more in depth on the dynamics that occur at the municipal level between administrators and committees, by doing, for example, an ethnographic study. Moreover, according to the specific "Tav" issue, a more detailed comparison between the main case of the Turin-Lyon route and the local case should be made in order to grasp with a better degree of detail the differences and the interconnections between the two cases. Finally, with reference to the internet, the same analysis proposed here could be applied with reference to different routes but also with reference to other, not necessarily techno-scientific, controversies which have arisen in the areas affected by the "Tav" Venice-Trieste construction, in order to see if there are further elements that condition or enrich the present scenario of public participation.

In the light of the elements that have emerged from my study, I have strengthened my belief that public participation cannot be read as a single, extemporary moment, tied to a specific topic but must rather be understood as a process, which is built over time as the sum of individual actions, events, attitudes, affecting both the public and the private dimension of the life of every citizen.

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Appendix

Daily newspaper's codesheet

Thematic section	1 = PG 2 = Venice 3 = Treviso 4 = Pordenone 5 = Udine 6 = Gorizia 7 = Trieste 8 = Padua 98 = Other _____ 99 = NA
Type of article	1 = Article on a specific news item 2 = in depth article on the project/event related to the project 3 = Comment/Editorial 4 = Interview 98 = Other_____ 99 = NA
Actor A_Position/role *Consultant: directly belongs or frequently works with the P.A. (E.g. Consultant for the Ministry of the Environment for the feasibility study)* *Officer: internal expertise, he/she deals with the means and not with the aims*	1 = External S&T expert 2 = External legal/economic expert 3 = Administrative Officer 4 = Elected Representative 5 = Activist 6 = Legal/economic consultant 7 = S&T Consultant 98 = Other _____ 99 = NA
Actor A_ Affiliation	1 = Internal/affiliate to the committees 2 = Outsider/called by the committees 3 = Internal to the PA 4 = External/called by the PA

	5 = Outsider/called by PA and committees 6 = Outsider/called by others 98 = Other_____ 99 = NA
Actor A_Position on the project	1 = In favor 2 = Against 3 = Uncertain/procrastinator 4 = Neutral 98 = Other 99 = NA
Actor B_Position/role *Consultant: directly belongs or frequently works with the P.A. (E.g. Consultant for the Ministry of the Environment for the feasibility study)* *Officer: internal expertise, he/she deals with the means and not with the aims*	1 = External S&T expert 2 = External legal/economic expert 3 = Administrative Officer 4 = Elected Representative 5 = Activist 6 = Legal /economic consultant 7 = S&T Consultant 98 = Other _____ 99 = NA
Actor B_ Affiliation	1 = Internal/affiliate to the committees 2 = Outsider/called by the committees 3 = Internal to the PA 4 = External/called by the PA 5 = Outsider/called by PA and committees 6 = Outsider/called by others 98 = Other_____ 99 = NA
Actor B_Position on the project	1 = In favor 2 = Against 3 = Uncertain/procrastinator 4 = Neutral 98 = Other 99 = NA
Actor	1 = External S&T expert

C_position/role *Consultant: directly belongs or frequently works with the P.A. (E.g. Consultant for the Ministry of the Environment for the feasibility study)* *Officer: internal expertise, he/she deals with the means and not with the aims*	2 = External legal/economic expert 3 = Administrative Officer 4 = Elected Representative 5 = Activist 6 = Legal/economic consultant 7 = S&T Consultant 98 = Other _____ 99 = NA
Attore C_ Affiliation	1 = Internal/affiliate to the committees 2 = Outsider/called by the committees 3 = Internal to the PA 4 = External/called by the PA 5 = Outsider/called by PA and committees 6 = Outsider/called by others 98 = Other_____ 99 = NA
Attore C_Position on the project	1 = In favor 2 = Against 3 = Uncertain/procrastinator 4 = Neutral 98 = Other 99 = NA
Keyword 1	1 = Environmental impact/risk 2 = Transport/technical problems 3 = Health/Disease/epidemiology 4 = Impact on the territory/cementification/suffering 5 = Problems of representation/participation and democracy 6 = Funds / economic issues 7 = Economic impacts/employment 8 = Competitiveness 9 = Branch layout 98 = Other 99 = NA

Keyword 2	1 = Environmental impact/risk 2 = Transport/technical problems 3 = Health/Disease/epidemiology 4 = Impact on the territory/overbuilding/suffering 5 = Problems of representation/participation and democracy 6 = Funds/economic issues 7 = Economic impacts/employment 8 = Competitiveness 9 = Branch layout 98 = Other 99 = NA

Facebook_Code Sheet

V_01_FORMAL PERTINENCE_ Is the content of the post about TAV?	1 = yes 2 = No
V_02_Topic_Which is the topic of the post?	Text: *mobilization* 11 = promotion of events / initiatives directly concerning the high speed railway (every initiative organized with the aim to inform) 12 = creation/strengthening of group identity/visibility 13 = expression of solidarity to the cause 14 = commemoration of significant events 15 = real-time information on events related to the high speed railway 16 = report on an event directly related to the high speed railway Argument/assessment (go to V_03) 21 = expression of judgment/opinion on the infrastructure 22 = expression of a judgment/opinion on an episode of the story diverse from mobilization 23 = expression of a judgment/opinion on other actors involved or on their positions vs. the infrastructure

	24 = expression of judgment/opinion on protest initiatives 25 = quote of others' opinions on the project 26 = quote of others' opinions on protest/mobilization … 27 = quote of others' opinions on other events related to the high speed railway 5 = indication of sources of information/discussion groups 6 = exhortation to participate in protest on other kinds of issues (only if it encourages taking part in it on behalf of the movement) 7 = information quoting newspaper articles literally <u>Link</u> 8 = disclosure of information about events/events (e.g. "live on TV") 9 = information about the facebook group <u>disclosure of information with reference to the news sites (online/offline version)</u> 31 = opinion/point of view/event about the project

	32 = opinion/point of view/information an event (other than mobilization) connected to the high speed railway (e.g. book release ...)

34 = information/point of view on a protest/mobilization on the high speed railway

35 = live information on an event related to TAV

<u>disclosure of information with reference to</u>
<u>other settings (= Blogs, websites, Facebook pages...)</u>

41 = opinion/point of view/event about the project

42 = opinion/point of view/information an event (other than mobilization) connected to the high speed railway (e.g. book release...)

44 = information/point of view on a protest/mobilization on the high speed railway

45 = live information on an event related to TAV

98 = other
(_____) |

V_03_ Which is the branch the text of the post refers to?	1 = HRS Venice-Trieste (go to V_04) 2 = HRS Turin-Lyon 3 = HRS Brennero 4 = HRS general project (Italy) 98 = other (_____)
V_04_ Does the post make explicit reference to an actor (individual, institution, association…) who says or does something about the project itself or an event related to it ?	1 = yes 2 = no
V05_Actor 1_Role	1 = Economist 2 = Engineer 3 = Jurist 4 = Chemist/biologist 5 = Geologist 6 = Physician/epidemiologist 7 = elected representative 8 = Activist 98 = other (_____)
V_06_Actor 1_Affiliation	1 = Veneto Region 2 = Friuli Venezia Giulia Region 3 = Province of Venice 4 = Province of Udine 5 = Province of Gorizia 6 = Province of Trieste 7 = Other Province (_____) 8 = Municipality of Quarto d'Altino 9 = Municipality of San Donà di Piave 10 = Municipality of Portogruaro

	11 = Municipality of San Giorgio di Nogaro 12 = Municipality of Jesolo 13 = Municipality of Bagnaria Arsa 14 = Municipality of Trieste 15 = Municipality of Venice 16 = Other Municipality (_____) 17 = Ministry of Economic Development 18 = Ministry of Infrastructure and Transport 9 = Ministry of the Environment 20 = Other Ministry (_____) 21 = RFI (National Railway Company) 22 = European Union 23 = No Tav Basso Piave Committee 24 = No Tav Bagnaria Arsa Committee 25 = Other Committee (_____) 26= NGO/Environmental association 98 = Other (_____) 99 = NA

Committees' interview questions

Personal involvement

1. Why have you been involved in the "Tav affair"?
2. Do you belong to any other association/committee apart from the one concerning the Tav?
3. What is your role within the committee?

Uses of the internet

4. What kind of initiatives do you organize to make the public aware of the "Tav affair"/to make them interested in your cause?
5. *Can you describe the process through which you convey information/publicize an initiative about o Tav? [which media do you appeal to?/with what aim?/who are the people involved in this process and what roles do they play?]*
6. What role does the internet play for the inner organization of your committee, for the coordination of your initiatives?
7. Is there anyone who is mainly engaged in the management of your online presence? Why did you choose him/her?
8. (You are one of the most active members of the Facebook group): what is the audience you are thinking of when you write something on the Facebook wallpost? Who do you think you are writing for?

Social Network

9. Are there any other subjects (persons, associations, committees…) who you are in touch with, who help you/support your initiatives? How do they support you? What kind of experts/ knowledge have you referred to in order to support your points of view/ to organize your

actions? *[did they already belong to your network? how did you get in contact with them?]*

10. id any contact/any debate with the side of your opponents take place? *[if there was: how did it take place? if not: is there any particular reason for the lack of these moments?]*

The story

11. What are, in your opinion, the most important moments of the Tav Venezia-Trieste story?

Public participation

12. *(relying on your personal experience)* what does the world participation mean in the context of a public infrastructure project such as the Tav?

13. *(relying on what you come to say)* what do you think should be maintained/enhanced/changed in the specific Tav affair, concerning public participation?

Institutions'interview questions

Personal involvement

1. Why have you been involved in the "Tav affair"?
2. What is your position within the institution you are representing?

Uses of the internet

3. What kind of initiative do you organize to make the public aware of the "Tav affair"/to make them interested in the issue? What role does the internet play for the organization of your activities? What is its role in the specific "Tav affair"?
4. Is there anyone who is mainly engaged in the management of your online presence? Why did you choose him/her ?
5. Did you have a look at the contents of the committee's websites or, on their pages inside the social networking sites?

Social network

6. What kind of experts/ knowledge have you referred to in order to support your points of view/ to organize your actions? *[did they already belong to your network of consultants? Why did you decide to refer to them?]*
7. Did any contact/any debate with the side of your opponents take place? *[if there was: how did it take place? if not: is there any particular reason for the lack of these meetings]*

The story

8. What are, in your opinion, the most important moments of the Tav Venice-Trieste story?

Public participation

9. *(based on your personal experience)* what does the world participation mean in the context of a public infrastructure projects such as the Tav
10. *(based on what you just said,* what do you think should be maintained/enhanced/changed in the specific Tav affair, concerning public participation?

Lay public's interview questions

Personal involvement

1. Why have you been involved in the "Tav affair"?
2. Do you belong to any other association/committee? What is your role within the committee?

The story

3. How do you keep informed about the story?
4. How do you manage the amount of (controversial) information that is spread about the Tav?
5. Did you take part or (even organize) any initiative regarding the Tav?
6. What role has the internet played regarding your involvement in the affair?
7. What are, in your opinion, the most important moments of the Tav Venice-Trieste story?

Public participation

1. *(based on your personal experience)* what does the world participation mean in the context of a public infrastructure project like the Tav?
2. *(based on what you come to say* what do you think should be maintained/enhanced/changed in the specific Tav affair, concerning public participation?