



Developing Citizens' Observatories for Environmental Monitoring and Citizen Empowerment: Challenges and Future Scenarios

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Abstract: *The EU-co-funded project CITI-SENSE defines citizens' observatories as communities of users that participate in both environmental monitoring and environmental governance. This paper concentrates on the latter dimension. It introduces the current challenges faced by this project in developing said observatories, as well as the general approach used to deal with them. It then proceeds to sketch four different future scenarios, which permits to identify the probable consequences of these observatories under each of them. It is argued that in those contexts where citizens' observatories are expected to play a limited role, their beneficial consequences for democracy are straightforward and the risks associated to them slight. In contrast, a more ambitious objective such as integrating them into governance mechanisms might not only be impossible in some places, but also normatively undesirable.*

Keywords: *Citizens' observatories, environmental governance, participatory governance, citizen participation, democratic innovations.*

Acknowledgement: *The ideas presented here evolved from work undertaken in the context of studies funded under the project CITI-SENSE. CITI-SENSE is a Collaborative Project partly funded by the EU FP7-ENV-2012 under grant agreement no 308524 in the period 2012-2016. The authors would like to thank E. Turco, M. Nieuwenhuijsen, W.A. Lahoz, D. Broday, H.Y. Liu, M. Kobernus, K. Cada, and three anonymous reviewers for their comments on previous versions of this paper.*

Citizens' Observatories and the CITI-SENSE Project

CITI-SENSE is a collaborative project partly funded by the European Seventh Framework Programme (FP7), involving 28 partner institutions from Europe, South Korea and Australia. It is one of the five Citizens' Observatories Projects which are being supported

by FP7 under the topic ENV.2012.6.5-1 “Developing community-based environmental monitoring and information systems using innovative and novel earth observation applications”.¹ CITI-SENSE, in particular, started in October 2012 and lasts over a period of four years. Its main objective is to develop citizens’ observatories, which are intended to empower citizens to participate in environmental governance and to support and influence societal and policy priorities, as well as the associated decisions. These observatories are defined as

“communities of diverse users that will share technological solutions, information products and services, and community participatory governance methods using appropriate communication solutions (e.g., social media), and who will by these activities complement established environmental data and information systems and improve local decisionmaking about environmental issues” (Bartonova & CITI-SENSE Consortium, 2012)

The basic idea behind this concept is that the citizenry can, and should, be involved in environmental monitoring, data production and interpretation, and decision making on environmental matters. Namely, CITI-SENSE seeks to develop and test sensors for distributed monitoring of environmental exposure and health associated with outdoor air quality and the physical environment, as well as the quality of indoor environment in schools. These sensors should also enable community evaluation and planning of public spaces. In this regard, one of the distinctive elements of CITI-SENSE’s approach is that said sensors are expected not only to collect ‘objective’ data, but also citizens’ perceptions of their immediate environment, that is, ‘qualitative’ or ‘subjective’ data. Moreover, the project aims at developing and testing information and communication technologies (i.e. platforms) with which to process the data gathered through the aforementioned sensors. The third goal is to transform these data into useful information products for citizens. To accomplish this task, the project seeks to engage citizens in defining what they consider to be useful information products. Finally, concerning citizen participation in environmental governance, the objectives are to learn from citizens’ experiences and expectations, raise environmental awareness, motivate citizens and stakeholders to participate in the decision making process, and provide a transparent link between this decision making process and the citizenry.

To establish these observatories, CITI-SENSE is currently working with citizens, non-governmental organisations and public representatives, as well as with representatives of the established environmental information collection systems, aiming at identifying current priorities, interests and needs. The consortium also works with the technological community to find out how to meet these needs. Although the project is structured to address all these issues, due to space limitations, in this paper we will concentrate solely on the participatory dimension and leave aside all those questions regarding the development of new technologies and the technicalities related to the collection of environmental data.

The reasons justifying the creation of citizens’ observatories, as well as participatory environmental governance more generally, are based on both practical and normative considerations. As for the former, it has been argued that citizen participation has the potential to enhance the efficiency of public policies. Through citizens’ involvement in governance networks, local knowledge and information about citizens’ interests, values and concerns can be inputted into the decision making process, allowing decision makers to draw from a larger set of

¹ For more information on these projects, visit www.citizen-obs.eu.

information and permitting them to consider a greater number of interests and perspectives. This should lead to more inclusive decisions as well as reduce opposition and implementation problems. Besides, participatory governance might foster compromise among stakeholders and lead to more creative solutions. There are, furthermore, normative reasons for promoting citizens' observatories. The most important one is that engaging citizens in governance networks, and therefore enhancing their voice, is a way of acknowledging and respecting their moral and political autonomy.

All these considerations are, however, rather abstract and generic. Ultimately, it is an empirical matter whether participatory arrangements in a specific context actually live up to the practical and normative expectations put on them. So only with hindsight is it possible (if at all) to assess adequately whether citizens' observatories are in fact capable of delivering what they promise. In any case, it is already possible, and sensible, to reflect upon what the probable outcomes of these citizens' observatories might be under different scenarios. These considerations, although speculative, are relevant as they address the problem of the second-best (Goodin, 1995); that is to say, they help to identify what the consequences of political ideals and their institutionalisation (in this case through citizens' observatories) might be in a specific context. In this way, they enable us to assess whether citizens' observatories really constitute a desirable institutional innovation in all (probable) settings or, in contrast, whether under specific (and also probable) circumstances their pursuit should be tempered given their probable consequences under these specific conditions.

In the remaining of this paper, we will, first, present how CITI-SENSE is currently trying to implement the concept of citizens' observatories, the challenges it is facing and the general strategy adopted to deal with them. As stated earlier, we will concentrate solely on its participatory dimension. In the second part of the paper, we will assess the probable consequences that citizens' observatories might have under different scenarios conceived of as ideal-types (in the Weberian sense of this expression). Some consequences about the desirability of citizens' observatories under these different scenarios will be drawn.

CITI-SENSE's Approach to Creating Citizens' Observatories

In this CITI-SENSE project, 'empowerment initiatives' (EIs) are used to develop and test citizens' observatories. EIs concentrate on the measurement of just one or few elements of the immediate environment, and they, too, seek to engage citizens and stakeholder in the monitoring of their environment, raise environmental awareness, and provide channels through which societal and policy priorities can be influenced. EIs related to three environmental issues of societal concern are being organised at the moment. These include:

- Community planning of public spaces including issues such as noise prevention, thermal comfort and urban landscape perception. An EI on this issue will be held in Vitoria (Spain).
- Quality of indoor environment in schools. Oslo (Norway), Belgrade (Serbia), Edinburgh (Scotland) and Ljubljana (Slovenia) are the locations where EIs on this topic will be held.
- Environmental exposure and health associated with urban air quality and the physical environment. EIs on this issue are being organised in Barcelona (Spain), Belgrade (Serbia), Edinburgh (Scotland), Haifa (Israel), Ljubljana (Slovenia), Oslo (Norway), Ostrava (Czech Republic) and Vienna (Austria).

This heterogeneity of locations, although beneficial in some respects, poses a crucial challenge. On the one hand, a robust demonstration of the feasibility of the concept of citizen's observatories and of the technical solutions developed for them requires that they are tested in a wide variety of settings and in relation to different environmental and governance issues – in this regard, this heterogeneity should be welcomed. However, it also creates considerable difficulties. Not only do these locations diverge as regards their political culture and political system, but different environmental issues are also expected to attract different social groups and stakeholders, with different expectations, different ways of engaging the public and interacting with political and administrative authorities etc. This is connected to another challenge, namely what can be called the myth of best practices.

This challenge is related to the difficulty with which good practices and participatory institutions travel (for a discussion of this problem, see Smith, 2009). Whereas some of these participatory institutions such as deliberative polls have been organised successfully in a wide variety of places, others, for instance participatory budgeting, have been 'exported' with less success. This is probably related to the fact that the first kind of participatory-cum-deliberative institution, deliberative polls, is based on a model of intensive participation during a short period of time (usually one or two weekends), during which participation is closely supervised by trained facilitators. Participatory budgeting, in contrast, requires not only prolonged participation, but if we pay attention to successful cases such as Porto Alegre's, it also demands greater involvement on the part of social actors as well as greater social self-organisation. For example, the existence of a vivid civil society and experienced political activists willing to 'teach' newcomers how to participate effectively has been cited among those factors which make Porto Alegre Participatory Budgeting so successful (Baiocchi, 2001). In this regard, citizens' observatories and EIs resemble participatory budgeting more closely than deliberative polls, namely they extend over a long period of time and are thus dependent upon a number of contextual factors which cannot be modified at will or neutralised through the use of trained facilitators. Attention to these contextual factors means that there are no ready-made solutions or a set of good practices which can be applied straightforwardly to every case. Granted, it is usually possible to learn from other participatory institutions and locations, and to draw from them some lessons as to how these institutions should be, or should *not* be, set up. The point, however, is that concerning some participatory institutions, these lessons that one can draw from other cases provide almost a ready-made formula which can be applied to a wide variety of settings. In contrast, they offer less guidance regarding other participatory institutions which are more sensitive to contextual variations. The latter is the case of participatory budgeting and, presumably, of citizens' observatories. This means, then, that regarding the organisation of citizens' observatories and EIs, we are always forced to attend to the specificities of each setting and think anew what can be most feasible in each context.

Apart from this, a survey conducted among EI-coordinators reveals that there are a number of challenges specific to the different locations where EIs will be held. In some places, local governments not only refuse to take measures toward better air protection, but also voice doubts over the very significance of air pollution. Moreover, some public administrations are reluctant to share data on air pollution and noise levels, and they are unwilling to share their decision making capacity with citizens. Besides, in some cities industrial actors question publicly the health impact of environmental degradation, while portraying environmental protection as causing unemployment and leading to economic inefficiency. This results in a decline of public interest in

air pollution and readiness to support public action. Last but not least, underestimation of air pollution and distrust and general feelings of political disaffection can lead to difficulties in involving and retaining a sufficiently large number of EI participants.

In order to respond to these challenges, CITI-SENSE draws from previous participatory experiences and research on this topic, but for reasons mentioned earlier, it has to do without recourse to simply copying and pasting best practices and ready-made models of citizen participation. In contrast, the general strategy has to be more flexible and complex enough to allow for the specificities of each EI. At the moment, this general strategy consists in creating 'learning organisations' within the CITI-SENSE consortium, as well as converting the whole consortium into a learning organisation. This, we believe, should deliver this required level of complexity and flexibility.

Taking this concept from Senge (1990), O'Farrell & Anderson (2010) have extended it beyond the realm of economics. They define learning organisations

'as organizations that share and develop knowledge, resources and ideas towards a common goal and are constantly transforming themselves in order to meet this goal. They are typically informal temporary groups, assembled to focus on a particular problem, however they are not excluded from being attached to formal institutions (depending on the nature of the problem). Such organizations would serve to make research socially relevant and user-informed and simultaneously serve the ends of stakeholder empowerment.'

In a nutshell, learning organisations are expected to promote mutual learning through cooperation and interaction among different actors in an iterative process. The basic idea is that EIs are implemented in parallel fashion, each focusing on its own challenges and solutions, but at the same time communicating with the others. EIs are structured in different iterative cycles or cycles of participation: a pilot study, the main study, an optional awareness study or follow study etc. The partners of the CITI-SENSE consortium, in turn, are divided into specific Work Packages and expected to monitor and provide common solutions to the EIs in terms of technological devices, practical guidance and advice, as well as assistance tailored to the specific needs of each case.

This learning organisation approach to implementing EIs and citizens' observatories shifts the focus from identifying best practices and developing standardised models of citizen participation to managing communication and mutual learning within the CITI-SENSE project. For this purpose, several measures have been agreed:

1. Implement the EIs in parallel fashion, so as to maximise mutual learning opportunities.
2. Develop surveys and semi-structured questionnaires intended to collect information systematically from the EI-coordinators and the participants in these initiatives. These tools are especially oriented to monitor progress and detect challenges and potential risks early on.
3. Semi-structured interviews and informal conversations both online and offline are also expected to contribute to monitoring progress and detecting challenges and risks.
4. Elaborate and disseminate documents and semi-structured forms providing a common but open framework to guide these diverse EIs.
5. Prepare and distribute documents disseminating within the CITI-SENSE consortium the most relevant information collected from each EI.

Future Scenarios: Perils and Promises of Citizens' Observatories

Ideals such as citizen participation and public deliberation have usually been conceived of as “regulative” standards; that is to say, as ideals “to which, all else equal, a practice should be judged as approaching more or less closely”, even when these standards are admitted to be “unachievable in [their] full state” (Mansbridge et al., 2010, p. 65). The problem, however, is that all other things are not usually equal, which brings to the fore the problem of the second-best (Goodin, 1995). In a nutshell, what the theory of the second-best states is that first-best ideals may well be undesirable guides to action under non-ideal conditions, given their probable consequences under these non-ideal circumstances. For instance, citizens’ active participation in politics (first-best ideal) might well be unwelcome when there are heightened ethnic tensions (non-ideal conditions), for it might trigger inter-ethnic violence. In these cases, one can argue for second-best ideals (e.g. forms of consociational politics among elites) instead of trying to maximise first-best standards. In principle, the problem of the second-best can arise in relation to any normative ideal or, as is the case with citizens’ observatories, when one promotes new institutions in order to pursue some normative standards. This is the reason for foreseeing future scenarios, for they provide a way of predicting under which probable (non-ideal) circumstances citizens’ observatories are likely to lead to undesirable outcomes and, hence, under which circumstances one should instead pursue second-best standards.

Given the challenges mentioned thus far and the locations where EIs are being held, four possible scenarios for citizens’ observatories can be identified. The first one is, obviously, that of failure. Certain factors cannot be changed nor counteracted easily; for instance, the influence exerted by major industrial actors or citizens’ belief that environmental regulation might increase unemployment or their feeling that environmental governance is not a sufficiently relevant matter. The upshot of all these elements might be the failure of citizens’ observatories – i.e. we might not succeed in creating them in the first instance or we might create citizens’ observatories which are too weak, that is, whose policy and societal influence is negligible or which are easily co-opted and manipulated to legitimise decisions already taken.

Failure, however, is an ever present and well known risk when trying to institutionalise new forms of participatory governance, so there is little theoretical interest in dwelling upon this possibility. More interesting are the three remaining scenarios, since they allow to assess the perils and promises of citizens’ observatories in more detail. Borrowing from Chambers and Kopstein’s (2006) introduction to the notion of civil society, we will distinguish the following possible scenarios:

1. (failed institutionalisation of citizens’ observatories);
2. citizens’ observatories *against* the state;
3. citizen’s observatories *in dialogue with* the state;
4. citizens’ observatories *in partnership with* the state.

As regards the second possibility, this scenario is likely in those locations where strong industrial or political interests hold sway over environmental policies and/or public authorities are unwilling to cooperate or enter into dialogue with (non-industrial) stakeholders, citizens and associations interested in environmental issues. Although relating to public authorities in an agonistic way might not look like a promising scenario at first sight, it might have positive outcomes. Essentially, it might empower citizens’ voice, promoting both greater accountability and responsiveness to citizens’ demands.

As regards responsiveness, however, at close examination it can be objected that public authorities are not obliged, nor should they be, to cooperate with, or satisfy, all social groups interested in a specific topic as they might not represent generalizable interests. Thus, responsiveness per se shall not be considered an asset – what matters is to promote the responsiveness of the political system to the right demands and for the right reasons.

Concerning accountability, it can be argued from a normative perspective that public authorities are obliged to give satisfactory reason for their decisions no matter what, essentially because the justification of collectively binding decisions amounts to acknowledging the moral and political autonomy of citizens and their concomitant “right to justification” (Forst, 2007). In practical terms, in contradistinction to normative ones, it can be objected that too much accountability might be counter-productive as it might foster blame-avoidance behaviour on the part of public authorities, inhibiting creative thinking as well as risk taking, and encouraging conformity to routines (Papadopoulos, 2008). In the case of citizen’s observatories, however, this is an unlikely scenario given the weak issue salience of environmental matters among Europeans. For instance, according to a recent Eurobarometer (n° 79, May 2013), only 4% of EU citizens regard “the environment” as one of “the two most important issues facing [their country] at the moment”, in stark contrast to other topics such as “unemployment” (51%), the “economic situation” (33%) or “rising prices/inflation” (20%). Even before the beginning of the economic crisis in 2008, environmental issues did not rank high among Europeans’ primary concerns – just 3 to 7% of the interviewed in 2006 and 2007 considered them to be among the two most important issues facing their countries. In this scenario, then, citizens’ observatories can be expected to promote greater, but not excessive, accountability.

Besides, they can be expected to produce reliable data on air pollution, noise levels, thermal comfort, etc., which can be made available to inform public debate, raise environmental awareness and identify socio-environmental problems. In sum, in this ‘citizens’ observatories *against* the state’ scenario, the contribution of citizens’ observatories to public life can be regarded as mostly positive and worth pursuing.

In the third possible situation, i.e. citizens’ observatories *in dialogue with* the state, they can also be expected to empower citizens’ voice, promote greater public accountability and possibly greater responsiveness, contribute with reliable environmental data to public debate, raise environmental awareness, and identify environmental problems. As regards their effects on the efficiency of the political system, concern can be voiced over the risk of slowing down the decision making process with so much ‘talk’. This is, for instance, one of the negative effects of participatory and deliberative processes pointed out by local authorities in England (Lowndes et al, 2001, p. 212). Nevertheless, it is also true that according to this study by Lowndes et al. almost two-thirds of the authorities surveyed reported that their experience of participation initiatives was largely positive – so this risk of making the political system more inefficient should not be overstated. In fact, the opposite case has also been made: greater deliberative interaction with public authorities can input new perspectives into the decision-making process, stimulating creativity and efficiency (e.g. Fung, 2004). Then again, it should be granted that this is not always the case either – as Mendelberg (2002, p. 177) puts it, “two heads are not better than one. Two heads can become better than one”. In the final instance it is an empirical matter whether citizens’ observatories can actually enhance the problem-solving capacity of the political system or whether they will simply slow down the decision making process.

Be it as it may, one of the most important assets of this scenario is that in it, citizens' observatories can be expected to provide a channel through which the citizenry can influence the decision making process while retaining the autonomy of both the state and civil society. Unlike the latter, that is, unlike those citizens and associations participating in citizens' observatories, public authorities are endowed with the legitimacy that derives from having been authorised by the citizenry through free, inclusive and fair elections. The crucial point is that free elections provide a means of attesting in an undisputed way the representative claim of public authorities. Furthermore, through them, political representatives are held accountable for their decisions, at least in principle. In contrast, although there are good reasons to see many citizens' associations, groups and individuals as representative of widely shared interests and concerns (Urbinati & Warren, 2008), we lack the means of settling controversies over their representative character in case they are questioned – which they usually are. Moreover, neither individuals nor citizens' associations are accountable (neither in principle nor in practice) to the citizenry as a whole. Last but not least, for all the controversies about the concept of civil society, political theorists still admit that the existence of a sphere of liberty, solidarity and cooperation independent from the state is fundamental for a well ordered democratic society: it contributes to protecting civil and political liberties, as well as the critical scrutiny of political power, and it allows social actors to organise themselves for political or non-political purposes in a relatively free and spontaneous way (Cohen & Arato, 1992).

In conclusion, citizens' observatories *in dialogue with* the state are able to channel communication between civil society and public authorities, while preserving the autonomy of both spheres. They can, furthermore, input the perspectives of social actors into the decision making process, while restricting decision making to public authorities who are accountable and whose representativeness can be gauged in an undisputed way. Finally, it is an empirical matter whether citizens' observatories will enhance the efficacy of public decisions or whether they will simply slow down the decision-making process, but this risk is largely offset by the contribution of citizens' observatories to public life in terms of promoting public accountability, producing reliable environmental data, raising environmental awareness, identifying environmental problems and, as argued at the beginning of this paper, allowing citizens to express their concerns and interests, respecting in this way their moral and political agency.

The fourth possible scenario is the most ambitious one, in the sense that it expects citizens' observatories to be granted some formal or de facto decision-making capacity in the formulation of public policies, and possibly an active role in their implementation and evaluation. Paradoxically, this scenario offers the greatest benefits, but it also poses the greatest risks.

On the positive side, it can be argued that engaging citizens in policy making is a way of avoiding paternalism and allowing social actors to take responsibility for their own affairs. Besides, it might enhance the efficiency and efficacy of public policies. First, it might be a way of engaging "key stakeholders" and taking their interests and concerns into account. As Bryson (2004, p. 23) puts it, "Key stakeholders must be satisfied, at least minimally, or public policies . . . will fail." Second, it has been argued that engaging citizens more directly in policy-making enhances the efficiency of public policies as it allows to approach collective problems in less bureaucratic and more flexible and creative ways. Yet, this is an empirical matter, and empirical evidence is split in this regard (e.g. Blanco & Gomà, 2002; Fung, 2004).

On the negative side, concerns over the representativeness of social actors participating in citizens' observatories as well as over the difficulty with which this representativeness can be gauged in an undisputed way, raise doubts about the desirability of involving citizens' observatories directly in public decision making. In fact, empirical research suggests that environmental issues are particularly interesting for 'post-materialist' citizens, which means, younger citizens and citizens who have been socialised in a context of economic security, that is, middle and upper-class individuals (Inglehart, 1998). In other words, granting citizens' observatories too much influence over public policies might mean granting younger, middle and upper-class citizens too much influence over the policy process, to the detriment of older and poorer citizens. Moreover, several risks have been associated with an increase in the number of actors involved in decision making. Political theorists, for instance, cite as characteristics of governance networks the "dilution of responsibility" and the erosion of the "imputability of actions" (Rummens, 2012, p. 39) – which, in turn, might weaken citizens' support of public authorities, as they increasingly fail to understand opaque governance processes. 'Comitology' in the EU is a case in point. Besides, a crucial argument questioning the desirability of this fourth scenario is related to what we argued earlier about the importance of preserving the autonomy of both the state and civil society. Apart from privatisation and third-sector bureaucratisation, Chambers & Kopstein cite the danger of compromising one of civil society's main functions, namely scrutinising state activity. According to them, "the problem is that in taking on state functions, civil society may begin to act and look like the state" (Chambers & Kopstein, 2006, p. 375).

Empirical research suggests, however, that the problems associated with this fourth scenario might not be so acute. For example, from their study of drug policy in Switzerland, Wälti et al. (2004, p. 108) conclude that "Drug policy is likely to remain under the scrutiny of popular and representative control when it comes to deciding on fundamental questions, no matter how decisions are made". In the particular case of this study, criticism of governance mechanisms is considered "relevant, albeit not entirely justified" (Wälti et al., 2004, p. 83), although, as the authors suggest, this might well be the case because of the deliberative and participatory setting of Swiss democracy, which "may simply provide sufficient safeguards against the potential democratic drawbacks of governance mechanisms" (Wälti et al., 2004, p. 108). This echoes our earlier discussion of the significance of contextual factors for citizens' observatories and participatory processes more generally.

Conclusion and Future Work

CITI-SENSE is a four-year, EU-co-funded project seeking to develop and test the concept of citizens' observatories, which are defined as communities of citizens' involved in environmental monitoring and environmental governance. To achieve this goal, empowerment initiatives are being organised in a number of mostly European cities, focusing on the quality of indoor environment in schools, environmental exposure and health associated with air quality and the physical environment, and community planning of public spaces. Given that these EIs require prolonged citizen and stakeholder participation, which makes them more sensitive to contextual variations, a flexible and learning-by-doing approach has been adopted vis-à-vis their organisation.

The first results from pilot studies, concentrating especially on the technological solutions developed for these citizens' observatories, are expected to be available by October 2014. More reliable data on these technological solutions, as well as on the engagement strategies deployed and the participation of citizens and other stakeholders in these observatories, shall be available by October 2015 approximately.

As argued in the introduction to this paper, ultimately it is an empirical matter whether citizens' observatories will actually live up to the practical and normative expectations put on them. So, only with hindsight will it be possible to assess (if at all) whether they are indeed capable of promoting the normative goals that they are intended to promote. Nevertheless, in this paper we have taken seriously the normative dimension of citizens' observatories and, associated to this, the problem of the second-best; namely the possibility that first-best values might provide bad guidance for action under non-ideal circumstances. To deal with this question, four probable future scenarios have been foreseen. We have contended that in those contexts where citizens' observatories will be able to play only a limited role – i.e. *oppose* the state or be *in dialogue with it* – their beneficial consequences for democracy can be expected to be straightforward and the risks associated with them quite limited. Paradoxically, in those other contexts where citizens' observatories will be able to play a more active role in the formulation, implementation and evaluation of public policies, their contribution to democracy might be more ambiguous, possibly resulting in serious democratic shortcomings. This, however, needs not be the case in all settings. However, our discussion suggests that integrating citizens' observatories into governance mechanisms might not only be highly unlikely in some locations, but also normatively undesirable unless we have good reasons to believe that contextual conditions offer enough safeguards against the possible democratic drawbacks of citizens' observatories and governance mechanisms.

It is a well-known idea that *empirical* research cannot resolve *normative* controversies, as claims to empirical truth and normative rightness are of a different nature (Habermas, 1999). Nevertheless, this does not foreclose the possibility of empirical research enlightening normative discussions in several ways (Thacher, 2006). Future research shall address the following questions if it is to be useful for debates about the normative issues raised in this paper. First, it shall assess the validity and reliability of the data produced by citizens' observatories, as well as evaluate how this data is communicated (if at all) to the general public and used to inform public debates. Besides, it should analyse the influence of citizens' observatories on policy-making and on the relation between public authorities and the citizenry, concentrating, in particular, on whether the policy recommendations of actual citizens' observatories inform public policies, and whether these observatories encourage public authorities to provide 'better' justifications for their policy decisions (in the eyes of the citizens). Equally important is to study who participates in these observatories, with a view to determining whether they help to correct, or in contrast reproduce, existing inequalities in political participation. A methodologically more challenging question is to study what happens with public responsibilities once citizens' observatories are in place, which should help to find out whether responsibilities for policy decisions are indeed diluted, as critics convincingly argue, and if so, under what circumstances. Last but not least, future research shall pay attention to two interrelated issues; namely how the efficiency of environmental policies is affected by citizens' observatories, and second, whether they diminish the public contestation of political and policy decisions on environmental matters, as authors such as Chambers and Kopstein fear.

To conclude, our discussion also suggests that we should be prepared to face normative trade-offs when setting up citizens' observatories. For instance, these institutions might well contribute to engaging citizens in policy-making and encourage them to take responsibility for public affairs, but this is likely to come at the cost of reinforcing inequalities in political participation. We have claimed implicitly that political equality should prevail over the former goals, but strictly speaking we have not provided an argument why this must be the case. These are controversies which neither empirical research nor experimentation with novel institutions can solve, and which shall continue to foster normative speculation.

References

- Baiocchi, G. (2001). Participation, Activism, and Politics: The Porto Alegre Experiment and Deliberative Democratic Theory. *Politics & Society*, 29(1), 43-72.
- Bartonova, A & CITI-SENSE Consortium (2012). *Development of sensor-based Citizens' Observatory Community for improving quality of life in cities (CITI-SENSE)*. Collaborative project proposal presented to FP7, ENV.2012.6.5-1.
- Blanco, I. & Gomà, R. (2002). *Gobiernos Locales y Redes Participativas*. Barcelona: Ariel.
- Bryson, J.M. (2004). What to Do When Stakeholders Matter: Stakeholder Identification and Analysis Techniques. *Public Management Review*, 6(1), 21-53.
- Chambers, S. & Kopstein, J. (2006). Civil Society and the State. In J. S. Dryzek, B. Honig & A. Phillips (Eds.), *The Oxford Handbook of Political Theory* (pp. 374-381). Oxford: Oxford University Press.
- Cohen, J.L. & Arato, A. (1992). *Civil Society and Political Theory*. Cambridge, Massachusetts: The MIT Press.
- Forst, R. (2007). *Das Recht auf Rechtfertigung. Elemente einer konstruktivistischen Theorie der Gerechtigkeit*. Frankfurt am Main: Suhrkamp
- Fung, A. (2004). *Empowered Participation: Reinventing Urban Democracy*. Princeton: Princeton University Press.
- Goodin, R. E. (1995). Political Ideals and Political Practice. *British Journal of Political Science*, 25(1), 37-56.
- Habermas, J. (2003 [Orig. 1999]). Rightness versus Truth: On the Sense of Normative Validity in Moral Judgments and Norms. In J. Habermas, *Truth and Justification* (pp. 237-275). Cambridge, Massachusetts: The MIT Press.
- Inglehart, R. (1998). *Modernización y posmodernización. El cambio cultural, económico y político en 43 sociedades*. Madrid: CIS.
- Lowndes, V.; Lawrence, P. & Stoker, G. (2001). Trends in Public Participation: Part 1 – Local Government Perspectives. *Public Administration*, 79(1), 205-222.
- Mansbridge, J., with Bohman, J. & Chambers, S. & Estlund, D. & Føllesdal, A. & Fung, A. & Lafont, C. & Manin, B. & Martí, J.L. (2010). The Place of Self-Interest and the Role of Power in Deliberative Democracy. *The Journal of Political Philosophy*, 18(1), 64-100.
- Mendelberg, T. (2002). The Deliberative Citizen: Theory and Evidence. In M.X. Delli Carpini, L. Huddy & R.Y. Shapiro (Eds.), *Political Decision Making, Deliberation and Participation: Research in Micropolitics, Volume 6* (pp. 151-193). New York: Elsevier Science.
- O'Farrell, P.J. & Anderson, P.M.L. (2010). Sustainable Multifunctional Landscapes: A Review to Implementation. *Current Opinion in Environmental Sustainability*, 2, 59-65.

- Papadopoulos, Y. (2008). Accountability and Multi-Level Governance: More Accountability, Less Democracy? Paper presented at the *Connex Workshop on Accountability*, European University Institute, Florence, April 2008.
- Rummens, S. (2012). Staging Deliberation: The Role of Representative Institutions in the Deliberative Democratic Process. *The Journal of Political Philosophy*, 20(1), 23-44.
- Senge, P. (1990) *The Fifth Discipline: The art and practice of the learning organization*. New York: Doubleday.
- Smith, G. (2009) *Democratic Innovations: Designing Institutions for Citizen Participation*. Cambridge: Cambridge University Press.
- Thacher, D. (2006). The Normative Case Study. *American Journal of Sociology*, 111(6), 1631-76.
- Urbinati, N. & Warren, M.E. (2008). The Concept of Representation in Contemporary Democratic Theory. *Annual Review of Political Science*, 11, 387-412
- Wälti, S.; Kübler, D. & Papadopoulos, Y. (2004). How Democratic is "Governance"? Lessons from Swiss Drug Policy. *Governance: An International Journal of Policy, Administration, and Institutions*, 17(1), 83-113.

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