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Social Labs: A Cooperative Participatory Methodology for Fieldwork

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Abstract

Social Labs is a methodology that belongs to the broad context of participatory approaches but seeks to distinguish itself through a practical vocation, aimed at promoting concrete actions in contextual settings. Social Labs can be understood as dynamic platforms where societal actors collaboratively experiment with ad-hoc strategies to foster social inclusion and address radicalisation and polarisation. The process involves three iterative activities: critical policy discussions, social experiment design and implementation, and outcome reflection for continuous learning. Social labs share with other participatory processes such as focus groups and multistakeholder workshops. What is unique about this methodological approach is that it is not expert oriented, but cooperative. It is also characterised by a strong action-oriented approach, and therefore does not necessarily require a thorough expertise, but it rather builds on common experiences and the desire to be involved in change-making.

In this sense, it appears promising for addressing the shortcomings of traditional research methodologies, which tend to focus on theoretical aspects, or on policies that are not sufficiently effective in countering social phenomena of a more complex form.

However, the experimental nature of this methodology, which is also its strength, requires a continuous process of validation and correction on the basis of the results obtained in specific areas.

Accordingly, the special issue will identify the salient aspects of this methodology, offer an overview of some case studies and integrate the two aspects in order to strengthen active participation practices as a method for addressing major social challenges.

Keywords: responsible innovation, participation, Social Labs, democratization, Participatory Action Research.

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1. Introduction

In the last decades we have experienced the deepening of problems that for their magnitude cannot be ignored any longer. The role of digitisation and globalisation have on the one hand worsened their severity but on the other hand increased the overall awareness about them.

Different national and international institutions have identified a set of major societal challenges to be addressed and potentially mitigated in the next decades[1]. Climate change, gender inequalities, poverty and hunger are just the most prominent amongst those problems that need to be eradicated at least partially. Additionally, there are a series of challenges that are directly or indirectly connected to these like those of energy transition, and access to services like education or healthcare. In turn, these challenges can increase polarisation and fragmentation, which can then lead to phenomena of radicalisation and violence. The complex nature of these problems continues to emerge in light of the protests that citizens raise against measures put in place by different political institutions (Driscoll, 2023).

Besides, the significant impact of digital technologies has contributed to raise awareness about the different needs, different perspectives at stake that are affected by these challenges. The speed enabled by digital technologies has contributed to the formation of new individual and collective identities, with the cross-fertilisation of cultures, values and world views. However, it also raised new doubts about the sustainability of these technologies, their malevolent use, as well as their role in shaping future societies.

The persistence of long-lasting challenges and the emergence of new ones automatically raises questions about the capacity of traditional research methodologies to be able to sufficiently identify the features of wicked problems. As well the traditional compartmentalisation of academic disciplines raises questions about the capacity of traditional research methodologies to be able to go beyond a diagnostic approach and suggest concrete measures that fall into different domains. In a similar vein and partially because of the limits entrenched in traditional research methodologies, also many policies tend to address only parts of a problem or to act on the symptoms rather that the cause. Macro-level interventions aimed at preventing negative occurrences are without doubts necessary tools. However, general approaches might overlook more complex scenarios where contextual dynamics generate different pictures. Furthermore, policies at the macro-level are not always producing the intended

[1] https://sdgs.un.org/goals; https://commission.europa.eu/priorities-2024 2029/european-social-fairness_en

effects at the micro-level because of the disconnection of groups and individuals from the social fabric.

Therefore, standard processes of inquiry can fail in being able to identify these forms of malaise or the sufferance experienced by individuals. Desk research or expert-based analyses tend to focus on existing knowledge and might encounter difficulties in identifying new forms of interactions as well as new claims or forms of sufferance.

Given the new forms of interaction, the question that arises is how do we manage to retrieve updated information and to include claims arising from society in a meaningful way? Is it possible to think of innovative research frameworks that can succeed in increasing the accuracy of knowledge and produce positive societal effects? What would be the main traits of such framework? In the next section we will operate a brief overview of some promising approaches to address these questions.

2. Participatory research frameworks

Scholars have identified several opportunities for preferring participatory processes in the development of research and innovation. Andy Stirling (2008) has summarised these opportunities in three categories: "the normative (e.g. that dialogue is the right thing to do for reasons of democracy, equity, equality, and justice), the instrumental (e.g. that dialogue provides social intelligence to deliver pre-committed policy objectives, such as those of building trust or of avoiding adverse public reaction) and the substantive (e.g. that policy choices can be co-produced with publics in ways that authentically embody diverse social knowledge, values, and meanings in a substantive manner)" (Sykes & Macnaghten, 2013, p. 95; Fiorino, 1990).

Nowadays, one can witness an increasingly significant number of attempts to respond to new and old societal challenges by means of participatory processes. Often triggered by the ineffectiveness of current measures or by scarcity, there are several varieties of approaches aimed at involving communities and practitioners in the definition of the solutions and sometimes also in the articulation of the problem (Pansera & Owen, 2018). All these innovative practices share the objective of strengthening the ethical and democratic legitimacy of policies and institutional measures but also their effectiveness.

These participatory settings entail several advantages with respect to research operated by scientists alone.

a) They are necessary in science as a social approach to research and innovation that goes beyond traditional dualistic perspective about science and society.
b) They can improve the ability of scientific research to understand complex social processes in depth
c) They can realistically address the new social cleavages, starting from the recomposition of a connection between people's everyday lives (lifeworld) and institutional action
d) They aim at generating deeper and long-term changes as they require a change in the relationship between those conducting the research and those who are the 'object' of the research, e.g. the communities being studied.
e) Finally they can more adequately respond to the claims demands of a more complex social reality, in which new instances and needs are explicitly emerging: the pluralization of social subjectivities.

However, this participatory-deliberative turn has not been without its challenges. Many have criticised whether rational consensus is ever possible (Horst, 2007), while others point to an inherent tension between 'opening up' discussion through the inclusion of multiple stakeholders and 'closing down' in order to be able to move forwards (Stirling, 2008).

Other common issues include: which publics are invited/included, the potential co-option of publics by policy and research institutions, the timing of such exercises (with regard to emerging technologies, i.e. they often occur too late), as well as that they are often used simply as a means of restoring public trust, or as an attempt to mitigate controversy (Parkhill et al., 2013).

More recently, in order for participatory approaches to genuinely foster the co-creation of knowledge, in a bottom-up manner, they are increasingly being seen as a form of experimental intervention in their own right (Bucchi & Neresini, 2008). Within the literature, 'experiments' have come to represent both spaces and instruments for participation in public affairs and a growing body of work has begun to explore such activities in terms of their inherently experimental quality (Lezaun et al., 2016).

A fertile tradition of innovative experimental practices in this sense is the one of Participatory Action Research (PAR) approaches (McIntyre, 2008).

As shown in the introduction of this special issue (Participatory Research to Address Societal Challenges and Radicalisation: an introduction), Participatory Action Research (PAR) is a methodological approach where the construction of knowledge emerges from the collaboration between scientific and practical realms—researchers and the directly affected individuals (Campbell, 2002). This approach is termed 'participatory' because it involves individuals who are 'experts by experience' not merely as informants but as co-

researchers. These co-researchers and professional researchers collaborate to transcend their pre-existing knowledge and viewpoints, fostering the co-construction of new insights (MacDonald, 2012). Participatory Action Research is embodied in research practices that are not necessarily new compared to traditional and established techniques. But they use these techniques in a new way: the difference between participatory and conventional methodologies lies not so much in the theories that inform these methodological frameworks or even in the methods they use, but in who defines the research problems and who generates, analyzes, represents, owns, and acts on the information sought (Cornwall & Jewkes, 1995). A pivotal element of PAR is the inclusion of external researchers often from marginalized groups throughout all phases of the research process. This inclusive participation aims to enhance the community members' knowledge, support their analytical skills, and empower them to plan and execute sustainable actions (Campbell, 2002). Co-researchers contribute to defining or redefining the research questions, selecting data collection tools, analysing gathered data, and formulating action strategies based on the newly produced knowledge (Suleiman et al., 2021; Medrado & Verdegem, 2024).

The key aspect of in PAR approaches is, in fact, 'cooperative relationship.' PAR challenges the traditional separation between researchers and participants, emphasizing cooperative relationships to produce knowledge that is both relevant and transformative. These relationships form the backbone of PAR, as they foster mutual learning, shared ownership, and a sense of collective responsibility for addressing real-world problems.

At its core, PAR seeks to democratize the research process. This is achieved through cooperative relationships that are built on key principles as mutual respect and trust, shared power and decision-making, reciprocity and mutual Benefit. Mutual respect underpins all aspects of PAR. Researchers acknowledge the lived experiences, expertise, and cultural contexts of participants as equally valuable to academic knowledge. Trust is cultivated through open communication, transparency, and a commitment to the shared goals of the research. Trust could be described as a non-negotiable element for genuine collaboration, emphasizing that it enables participants to voice concerns, share insights, and engage fully (Reason & Bradbury, 2001). PAR intentionally redistributes power within the research process. Rather than imposing externally defined questions or solutions, researchers and participants co-create the research agenda, design interventions together, and interpret results collaboratively. As Freire (1970) argues in his seminal work, *Pedagogy of the Oppressed*, this shared decision-making process empowers marginalized groups by turning them from objects of inquiry into active agents of change. Finally, cooperative relationships in PAR are reciprocal, meaning that all parties

contribute to and benefit from the research process. For communities, this might involve gaining tools for advocacy, actionable data, or increased capacity for self-determination. For researchers, the partnership offers deeper insights and ensures that the research is grounded in practical realities. Brydon-Miller et al. (2003) emphasize that reciprocity strengthens relationships and ensures the sustainability of the outcomes.

Developing cooperative relationships in PAR requires intentional strategies. These include continuous engagement, that does not end with data collection, but it extends throughout the research process. Researchers work with participants to analyze findings, apply knowledge, and evaluate outcomes. This iterative engagement builds rapport and reinforces the partnership. According to Stringer (2014), long-term involvement ensures that the research remains responsive to the community's evolving needs. The cultural competency and sensitivity brought by socially affected individuals highlights the care and cultural awareness in approaching communities, adapting methods to align with local values, traditions, and languages (Wallerstein & Duran, 2010). PAR also builds on conflict resolution mechanisms, with particular attention on the facilitation of dialogue in maintaining cooperative relationships (Chambers, 1994).

Last but not least, one of the most significant challenges in PAR is navigating power imbalances between researchers and participants. Despite the collaborative ideals of PAR, researchers often hold greater institutional authority, access to resources, and technical expertise. Cooperative relationships require researchers to actively dismantle these imbalances. Strategies include aspects like positional reflexivity, capacity building and equal valuation. Positional reflexivity demands from researchers to critically examine their own power and privilege, as well as the ways these influence interactions with participants (Finlay, 2002). Capacity building is meant to empower participants by providing training or resources ensures they can contribute meaningfully to all stages of the research process. Finally, equal valuation of knowledge explicitly rejects the notion that academic expertise is superior to local or experiential knowledge, creating space for multiple ways of knowing (Chilisa, 2012).

3. *'Intervention sociologique'*: a reference model for the PAR and Social Lab

In the history of sociology, a promising strategy is the 'intervention sociologique' or sociological intervention, developed by Alain Touraine and his team to study new social movements in the 1970s.

Sociological intervention is characterised by putting the theory of actionalism into practice. Actionalism, is a theory that affirms the existence of actors and logics of social action, and which looks to establish a link between the two. Accordingly, sociological intervention relies on the reflexive ability of the actors because it requires actors to engage in a process of reflection, even introspection, in which they analyse how they view and interpret the social world, and question their ability to act and participate in this world.

The aim of the method is to bring to light and analyse social relations in order to define the different dimensions that structure the action of actors:

More specifically it consists of organising meetings of groups of ten to fifteen people in order to discuss a specific issue, which has been formalised and suggested by the sociologists. The groups are not pre-formed groups but rather individuals who share the same commitment or experience but who do not know one another (Dubost, 2006).

They represent the social, political and cultural environment within which the actors develop and, by interacting with other members of the group, help reveal the nature of the actors' social relations.

Sociologists break with the traditional and academic position of axiological neutrality whereby the sociologists are expected to maintain a certain distance and confine themselves to recording opinions and statements. With the aim of developing a general sociological reasoning that accounts for an action or situation. To achieve this, they introduce hypotheses as the sessions progress, debating them within the group in order to make sense of the meaning of the action (Pichault, 2006).

At the end of the process, the conversion session is the opportunity for them to submit general hypotheses to the actors accounting for their situation.

For the founder of sociological intervention, the role of the sociologist is to reveal the stakes of the conflicts which prove the existence of social movements, the latter constituting 'the highest meaning' of collective behaviours (Touraine, 1978). For that, "the intervention must be as close as possible to the action" (Touraine, 1978, p. 205). This leads the researcher to go beyond the ideological discourse in order to grasp the actors in the depth of their militant action. Thus, the actors constituting the analysis group are generally not the leaders but more certainly the grass-roots actors fighting against a system they dispute. For sociological intervention, the researcher acts intensely and personally to get the control group to become aware of the nature of these social relationships.

As Touraine proclaims, this is only possible if the individuals fully participate in the interaction with the researchers. This interaction is particularly important during the various moments of restitution of the research interpretations and hypotheses. Contrary to other forms of intervention, the

Tourainian intervention doesn't however aim at a better adaptation or at the way of leading to a change; it intends to essentially serve knowledge (Touraine, 1978). Nonetheless, this knowledge may prove useful to the field actors. Like the intervention theories previously stated, the method developed by the Tourainian actionalism aims at arousing the auto-reflexive capacity of individuals:

> By means of the method, the actors are invited to undertake a reflection work, or indeed an introspection work, which places in its centre the analysis of the way they read and interpret the social world and which questions their capacity to act and intervene upon this world (Cousin & Rui, 2010, p. 514).

In organizing the permanent confrontation between the actors, the advisedly chosen interlocutors and the researchers, in seeking the auto-analysis of the group through a personal implication from the researcher, sociological intervention shows its similarities with all intervention sociological theories. As for the supporters of strategic analysis, their position is not totally different. The individual is a rational actor developing, for his own use, more or less elaborate strategies. The aim is to give an empirical account of the nature and the game rules which structure the relationships between the social actors.

In the next section, we will illustrate our proposal of participatory research in the line of what has been defined by this tradition, especially by the sociological intervention method developed by Touraine.

4. Social Labs

Following this line of development, one promising way that is becoming increasingly widespread is the method which can be referred to as the one of the Social Lab (Marschalek et al., 2022). The Social Lab is an approach that has been introduced by Hassan (2014) and that more recently is experiencing growing success in terms of number of occurrences, but also in terms of quality[2].

Although the concept is evolving, we can state that Social Labs are characterised by the basic following features. They are social because they address complex social challenges (e.g. poverty; sustainability; ageing; or radicalisation). They are experimental because they offer a real-life environment within which social experiments can be carried out. They are systemic because

[2] For a map of 100 Social Labs see http://social-labs.org/mapping-the-landscape-of-labs-agoogle-map/

of the level on which they aim to solve issues, they should try to focus on understanding and addressing issues which lie at the root of the problem identified.

Social labs share much with other participatory and deliberative methods such as focus groups and multi-stakeholder workshops. However, there also peculiarities that are not always pertaining to other participatory practices. The Social lab method aims at integrating the expertise of researchers with the experience of practitioners and stakeholders affected by a specific challenge. Differently from other participatory settings, the Social Lab is strongly focused on action. What is unique in fact about Social Labs is that they do not remain on a communicative or deliberative plan, but they entail an active component, they are cooperative. Being focused on action, they do not necessarily require a thorough expertise, but rather the experience(s) and a desire to be involved in change-making.

Social Labs can be viewed as 'containers' within which social experimentation is conceived, nurtured, and developed. In the simplest sense, social labs take a complex societal problem and connect people who are affected by this problem in various ways (Kieboom et al., 2015).

More specifically the Social Lab is built on four main components:

a) Complex problem: social labs are typically deployed to solve complex problems that need to be approached systemically as opposed to locally. Solving those problems involves re-thinking (as opposed to fine-tuning) standard approaches.
b) A set of stakeholders: individuals that affect or are affected by the situation under investigation. The stakeholders need to be prepared to intervene in the reality under investigation and thus to trigger a transition process towards a new reality.
c) A space for experimentation and play: an agreed-upon environment in which new ideas can be tested, giving shape to particular types of experience, enabling or constraining the possibilities for action.
d) A space for learning: this is a space where the stakeholder come together and reflect upon their experimental and gaming activities. The stakeholders' goal of this reflection is to better understand the complex problem and be better prepared for tackling it.

5. Social Lab Methodology

The Social Lab methodology is characterized by its experimental, interventional, and iterative approach (Timmermans et al., 2020; Shanley et al., 2021).

- It is *experimental* because, like methods used in hard sciences, it does not have a predetermined outcome or a fixed process. Instead, it adapts to the specific needs and challenges arising from the context and the group participating.
- It is *interventional* because its main aim is to design pilot actions that can produce tangible effects on specific aspects of broader challenges. Often, the objective is to keep the scale of the intervention very focused on specific issues.
- It is *iterative* because it does not end with one session but rather involves experimenting with the outcomes of the pilot actions and making necessary adjustments.

Four main roles can be identified within the sessions of the Social Lab:

a) Main-case owners**:** Participants in a project who aim to implement the Social Lab methodology within their processes.
b) Mirror-case owners**:** Stakeholders affected by (and thus interested in solving) the complex problem but not necessarily expected to implement the interventions discussed during the design process.
c) Researchers**:** Individuals with a cognitive stake in the context under discussion. They participate in the Social Lab to understand the phenomenon in question and to draw generalizable lessons applicable beyond the specific case.
d) Facilitators**:** Social Lab facilitators manage the organizational aspects of the lab. While managers make overarching organizational decisions, facilitators actively engage in discussions with main and mirror-case owners during meetings.

Participants should ideally represent diverse types of expertise, experience, and knowledge to ensure the process benefits from a range of perspectives.

In this sense, the inclusion of Quadruple or Quintuple Helix actors in the Social Lab methodology is essential for addressing complex societal challenges effectively and inclusively. These models provide frameworks for innovation and problem-solving that integrate diverse societal sectors.

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The Quadruple Helix framework extends the traditional Triple Helix model (academia, industry, and government) by incorporating civil society as a fourth dimension. This inclusion emphasizes the role of societal actors, such as non-governmental organizations (NGOs), local communities, and citizens, in co-creating solutions.

The Quintuple Helix further expands this model by adding the natural environment as a fifth dimension. This extension highlights the critical importance of sustainability and environmental considerations in innovation and decision-making.

It is important to include Quadruple or Quintuple Helix Actors in Social Labs in order to ensure and strengthen the following aspects.

Broadening the diversity of perspectives. Including actors from these helices ensures that solutions are informed by a wide range of experiences, expertise, and priorities. This diversity fosters holistic approaches that consider technical, social, economic, and environmental factors.

Interdisciplinary or multisectoral cooperation as a crucial aspect to generate realistic and widely accepted forms of innovation (policies, products, processes). The relevance and the impact of a solution ensuring that interventions are grounded in real-world needs and contexts, enhancing their applicability and long-term effectiveness. Systemic change. The quintuple helix model promotes systemic thinking by addressing root causes of challenges and their interconnections, particularly with environmental sustainability and social cohesion.

Social Labs aim to solve complex societal problems through experimentation and co-creation. By involving quadruple and quintuple helix actors, they ensure a participatory approach that empowers marginalized voices and local communities and create spaces for dialogue and innovation that integrate scientific, governmental, industrial, and civic perspectives.

In conclusion, the integration of Quadruple or Quintuple Helix actors in Social Labs is not only necessary but transformative. This inclusion ensures that the solutions developed are comprehensive, inclusive, and sustainable, reflecting the complexities of contemporary societal challenges.

6. Learning cycle

The actual method of Social Labs builds on the insights provided the pragmatist tradition and more specifically by John Dewey in his long-lasting attempts to identify the causes and steer the course of social change.

The social lab framework shares many of the main insights of pragmatism, a philosophy that highlights the necessity to deal with problematic situations in

a practical and contextual way, rather than only through scientific theories or abstract principles. Philosopher John Dewey (2008), for instance, emphasised that the understanding of reality and the resolution of concrete challenges always arises from the interaction between sensitive experience and thinking.

According to Dewey, we most of the time live and interact on the basis of habits and established practices. However, it happens that an individual or a group at a certain moment feels a discrepancy between the habitual behaviour and the achievement of the function that a specific habit is meant to produce. In other words, at a certain point the usual way in which we interact does not match any longer with a positive experience of a meaningful life. An individual feels a short-circuit, something that does not work anymore in the way it used. Therefore, she starts to reflect upon it and tries to understand what does not work and why. Accordingly, Dewey says that, similarly to what happens in a scientific investigation, often one starts formulating hypothesis about the causes of such change and potential ways forward. Dewey describes this process as a form of deliberation that one has with herself, or in the case of groups, with others. We imagine how things could be better and how feasible, how possible, those changes would be. If possible, then, we try things out, we experiment to understand if these new ways could realistically improve that problematic situation.

All this process is a contextual process, based on the actual reality in which one individual life and aimed at modifying the conditions of her specific life. It starts from the perception of a problematic situation, and it eventually solved when the individual or the group feels that the situation is not problematic anymore. Dewey rejects dualisms between theory and practice and the one between science and society. On the one hand, societal issues are already often solved in a similar way to scientific research. On the other hand, science is not immune from empirical and value-based motivations. Scientific research is always driven by problems which are selected amongst different ones and such choice is not a technical one, is after all a political one.

Problems are always felt as such and the objective of their resolution is to produce a situation of happiness. This theoretical framework is the one that informs the Social Lab methodology. In fact, the process of problem-solving that Dewey described mostly with regard to individual can be transposed to broader situations affecting groups or communities.

At a certain point one group will perceive the presence of a problematic situation and will act in ways that are comparable to the one described by Dewey. Accordingly, the Social Lab method reflects this process and aims at translating it into a controlled space, a laboratory where social issues are discussed and addressed.

The Social Lab method consists of four main steps that can be illustrated by the theory of experiential learning described by Kolb (1984) on the basis of pragmatism method. The theory of experiential learning exemplifies the steps occurring when a process of problem resolution occurs in the ways described above. In fact, at the basis of such method lies the realistic assumption that a process of problem resolution will generate change at practical level but also learning at the epistemic one (McAndrew & Richards, 2020). But effective learning happens when we go through the stages of each dimension, which form a cycle made up of four connected phases: experience of a problem, reflective observation, abstract conceptualisation, active experimentation (Moon, 2004). In other terms, it si possible to define the group-based solving activity as a space that happens because there is a shared perception of a problem. Then the group, integrating different ways of experiencing a trouble, discuss to identify a common formulation of the problem. Once the problem has been identified, the group continues a process of deliberation; participants discuss ways forward, generate hypothesis about what do. Once pilot actions are co-designed, case owners or volunteers will try if those measures can actually generate an impact or not. After a period of experimentation, the case owners will report to the group, highlighting success and failures, opportunities and challenges of those pilot actions. Then, depending on the outcomes of these pilot actions, the group can decide if and how to continue in order to mitigate the problem.

To summarise, the method of the Social Lab can be exemplified by a three-steps strategy based on the assumption that the 'experiential learning' cycle is not linear, but rather a continuous interactive process:

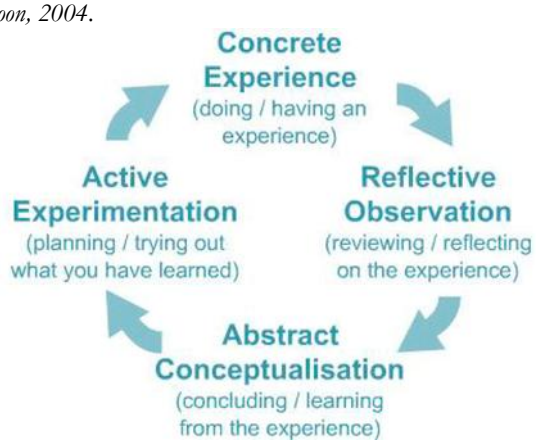
a) Discussion and diagnosis
   The cycle starts with the discussion on the current reality of the situation; and, diagnosing the key challenge (or group of challenges) that the lab will try to address in order to identify, state and agree on a specific challenge which is necessary in order to provide direction, as well as a shared understanding of what it is that the social lab wants to achieve.
b) Design and implementation
   It is the moment to identify ideas and concepts from the discussion about challenges, and discuss potential innovative solutions for confronting them. In the context of a social lab, innovation can be thought of as 'problem-solving' or a response to the question 'what do we need to do, make, or create in order to solve the challenge?'
c) Reflection and feedback
   The different pilot actions can be tweaked and improved, or discarded: the learnings from the process will feed into a thinking tool that can be

beneficial for practitioners and policy-makers to reflect on possible measures to help addressing processes and social dynamics leading to the complex problem to solve.

The Social Lab method, as well as those stemming from Touraine's line of thought, appear fruitful to innovate the research methodologies themselves as they show the necessity to maintain a certain flexibility of the approach considering the means available. Traditional methodologies disregarding contextual and non-scientific aspects will necessary be unable to grasp the complexity of the problem and consequently fail in providing effective measures for change.

7. Learning cycle table

Figure 1. Source Moon, 2004.



8. Opportunities and challenges

There are several opportunities in adopting the Social Lab methodologies.

a) The quality of the knowledge can be significantly higher than the one reachable by traditional research methodologies. It is more agile in learning new things. It can help identifying aspects that are not detected by scientists and provides useful indications on concrete solutions for the actors involved.
b) The effectiveness can be very high as the pilot-actions are co-designed with the actors affected or experienced. Often simple measures can trigger a positive domino effect on more complex scenarios.

c) It can strengthen the social bond that individuals might feel weak or absent, supporting the awareness about the importance of civic life and citizenship as an active part of a community.
d) It can realistically increase the sense of belonging of actors who feel detached or left behind by society. Actors who are asked to partake into defining a challenge and designing solutions will likely perceive themselves are useful, valuable.
e) It can consequently contribute to increase trust in institutions who are not deciding behind closed doors but democratically involving those who are affected by a challenge and/or have more experience about it.

However, there are also challenges, mostly related to lack of engagement, diversity of settings and challenges, institutional support and consequent ineffectiveness of the pilot actions.

a) Lack of engagement:
Depending on the challenge, it is possible to experience a lack of engagement from those who are affected by a problematic situation. One reason/aspect can be that of distrust about the possible resolution of the problem or in one's effective capacity to have an impact on the overall process. This ineffectiveness is often experienced by actors who live a situation of marginalisation or have seldom been involved in aspects related to problem-solving.
Another issue related to engagement, is the unwillingness to enter into a process that might be considered burdensome, time-consuming and not immediately rewarding. This is particularly true for actors belonging to the private sector but also often for representatives of public institutions.
Additionally, although actors are more willing to agree to discussing about the problem, they might be less inclined to take on pilot actions.
b) Diversity of challenges:
Related to the lack of engagement, another challenge is the one related to the diversity of the societal issues to be addressed. The societal challenges can be of various nature, more or less complex. The affected individuals could experience a situation of deprivation or be surrounded by situation of violence of social struggles. In a different fashion, the challenges may relate to specific economic problems like those belonging to the role of small economic actors[3], or the tensions arising with climate and energy transition, where environmental issues

[3] Project RRI Start - Responsible Research & Innovation Model for Impact Investment & Responsible Startups, see https://rristart.eu/.

can clash with territorial needs and drivers[4]. Therefore, the Social Lab methodology should be adapted according to the possibilities and the needs of the relevant actors.

c) Institutional support:
A fundamental condition to produce meaningful changes is the support of actors who belong to public institutions. Societal challenges are often wicked problems that have become intricated over time and in order for them to be mitigated at a systemic level they require institutional measures. Additionally, practitioners or affected individuals might read the lack of institutional presence as a symptom of scarce interest.

d) Ineffectiveness of pilot actions and of the Social Lab to generate change.
It is also possible that the pilot actions fail in producing the necessary change. This outcome could depend on the design of the pilot actions, from a fable support of from external conditions. However, as in every experiment, failure is a significant and equally important part of the process. Measures that turn out to be ineffective can provide many fruitful insights about the causes of the problematic situation that were previously not evident.

Finally, although the experience, the subjective component is very important in the framework informing this methodology, one crucial aspect is the necessity to identify some standards, some more objective criteria. How do we evaluate a positive impact not only in academic terms but from a societal perspective? Practitioners have implemented ways to assess the impact of labs experiments through interviews and questionnaires to be operated before and after the sessions that could form sorts of narratives. However, the additional challenges related to these tools are still to be evaluated further.

9. Conclusion

Long-lasting challenges and emerging wicked problems require innovative approaches. Great societal challenges like poverty, climate change, and hunger raise tensions between different drivers and different parts of the population. The measures put in place to address them often tend to disregard the overall picture, with often the disadvantaged parts of the population to be most affected. This blindness to contextual aspects in turn can raise phenomena of

[4] Project RIPEET - Responsible research and Innovation Policy Experimentations for Energy Transition, see https://ripeet.eu/.

social anger and violence. Accordingly, these challenges cannot be meaningfully addressed by traditional research methodology because they involve needs, values and claims that are either new or more difficult to identify. The questions that emerge are then about what methodology can realistically and meaningfully hope to overcome the current limits of academic and policy-related measures? It is not by chance that we have recently seen the proliferation of participatory action research approaches as a way to respond to the complexity of these challenges. One promising way to embrace this methodology and apply it to the analysis and address of these challenges is that known as Social Lab. Social Lab methodology is one that aims at bringing together experts and experiences individuals belonging to the categories of the quadruple or quintuple helix in order to articulate together the problem and potential ways forward. Despite its deliberative aspects, the Social Lab expresses an action-oriented attitude, which can be defined as a cooperative approach. Similarly to the method used in traditional scientific settings, the Social Lab adopts an experimental approach to addressing societal issues. Through a learning cycle it aims a generating change at the individual and the social level. The opportunities of this approach are several as it tries to overcome the most evident shortcomings related to compartmentalised or top-down measures. By taking into account contextual aspects that are brought about by affected individuals or experienced practitioners, the Social Lab can realistically produce a concrete impact when addressing complex problems. However, the experimental and innovative nature of this methodology entails some challenges related to the different challenges to be addressed, the necessary engagement and the role of institutions who can be recalcitrant to embrace new methodologies.

These aspects call for further experimentation of this methodology to help refining it according to the different and specific challenges.

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