

Between diving, breathing and splashing: metaphors as lenses to inquire public innovation initiatives

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Abstract

This paper focuses on metaphors as a methodology to design and reflect on design-led initiatives in the public sector. We are drawing on the experience of a capacity-building program developed in 2020 by Enap (National School of Public Administration) in partnership with teams of the Brazilian federal government, in which we conducted four projects through the metaphor of a collective dive. When analyzing the effects of the projects through conversations with participants, we expanded the metaphor, understanding the reflections as breathing, the project conditions as bubbles and currents, and the results as splashes. We see splashes as variable yet rarely acknowledged outcomes of programs that aim to simultaneously foster public innovation and collective learning. In this paper, we present an example of metaphors acting as boundary objects, adding granularity and nuance to the investigation of public innovation initiatives, and identifying their possible effects in relation to institutional logics and complex structures.

Keywords: metaphors, public sector innovation, government labs, design methodology, collective learning, boundary objects

1. Introduction

In this paper, we discuss the use of a metaphor to both design and make sense of design-led capacity building initiatives for civil servants in the Brazilian context. We are drawing upon learnings from the first edition of Janela GNova, a program that the National School of Public Administration's innovation lab (GNovaLab) carried out through projects in partnership with four teams from different areas of the Brazilian



federal government in 2020. Our aim is to explore what metaphorical concepts allow for, mostly in terms of noticing effects from projects that are usually overlooked by more traditional evaluation approaches, especially by those that consider lab interventions as part of a relatively linear policy process. Based on reflections from the projects conducted by Enap, we hope to contribute with a practical case to a growing literature on public and social innovation in intersection with service design theory and practice that accounts for a systemic conceptualization of the field (Vink et al., 2021).

Following a global rise of social and public innovation labs in the last decade, these organizational units are receiving growing attention from scholars in public administration and design (see for example Wellstead et al., 2021; Mcgann et al., 2018; Lewis, 2020; Kimbell & Bailey, 2017). Labs emerge in a variety of forms, sizes, focus areas and apply different methodological approaches to the rehearsal of management and policy practices (Maffei, Mortati, & Christiansen, 2018) in the face of contemporary challenges and in direct response to specific institutional locus and conditions. Beyond such differences, a relatively widespread characteristic among labs is an organizational approach to capacity building, mostly in terms of learning by doing and applying design-led experimental methodologies. The capacity building focus is particularly strong in GNovaLab, which is a lab within the National School of Public Administration in Brazil set to collectively work on public challenges through project-based learning (GNova, n.d.).

Even though labs are often created under the mandate to develop a culture of experimentation in the public sector, there is still little understanding of their actions and results, even less when considering the specificities of the Latin American context (Ferreira and Botero, 2020; Acevedo and Dassen, 2016; Ferrarezi et al., 2021). In many cases, the legitimacy of lab initiatives is approached by managers and civil servants with skepticism or resistance precisely due to difficulties in measuring and communicating the value they generate (Werneck et al., 2020). Questions like "so, did it work?" look for clear-cut responses in a linear perspective of the implementation of a "thing". Besides the reductionism that this view encapsulates, it often does not acknowledge more diffuse effects and conditions of such projects, in resonance with the complexities of institutional logics and real-life applications of design methods (Akama, 2009) beyond context-less toolkits and playbooks, still predominant in fields of service design and public innovation (Vink et al., 2021).

Given such circumstances, we deployed the metaphor of diving as a boundary object (Star, 1989) in the design and analysis of the Janela GNova program with the aim of contributing to a more nuanced conversation about possible outcomes of initiatives focused on collective learning in the context of the public sector. Metaphors, devices





to understand one thing in terms of another (Lakoff & Johnson, 1980), have been commonly employed in the field of service design since its early stages (from the traditional backstage and front stage, to more exploratory accounts, as in Holmlid & Korper in ServDes.2020, 2021), mostly because service experiences tend to be intangible, heterogeneous and ambiguous. A metaphor can work as a thinking structure that directs our attention and creates a shared understanding of what is possible. In that way, we hope to bring a critical perspective on the metaphors we design by, understanding both their affordances and limitations.

Almost two years after the experience of the Janela GNova, we are approaching the conversation about outcomes at the program level rather than from the specific results of a single project or individual development of skills. We are examining dimensions such as safe conditions for experimentation, for the adoption of new work practices and for the institutionalization of initiatives. Looking for meaningful similarities in such a diverse set of projects that participated in the program, in both topic and scope, but also organizational culture and team configuration, has allowed us to find context-specific responses to a shared journey. Following and expanding the metaphor that guided the methodological process, we approached the effects of the program as water splashes from a dive, understanding waves and ripples in a movement between the scales of artifacts, services, policy and systems. The idea of splashes recognizes the immense variety of shapes and sizes of effects that might appear in different moments of the process, while adopting a humble and honest attitude to non-direct relationships of causality in multi-actor organizational dynamics and interdependencies.

We begin by contextualizing the metaphorical approach we took in the Janela GNova program, and how it can act as a boundary object (Star, 1989). We follow with a description of the context of the program, and how we applied the metaphor both in terms of the methodology we adopted and in how we analyzed the effects of the program. We then present further understandings facilitated by the metaphor, including the project environment as *bubbles*, the adoption of new work practices as *currents* and signs of institutional change as *splashes*, discussing the observed reverberation of the artifacts and services created in the projects towards the scale of policy and systems, as well as what enabled their emergence. We conclude with expected contributions, limitations and possibilities for future inquiry.





2. Metaphors as methodology

Deixe a meta do poeta, não discuta Deixe a sua meta fora da disputa Meta dentro e fora, lata absoluta Deixe-a simplesmente metáfora (Gilberto Gil, 1982)

Often associated with poetic imagination and extraordinary thoughts, metaphors are actually present in our conceptual systems, influencing the way we think and act in the ordinary sphere of life (Lakoff & Johnson, 1980). In that sense, metaphors can be effective as a vehicle for building new concepts within public institutions and their processes, especially when they help facilitate conversations that bring together diverse experiences through a common language (Werneck el at., 2020). Similar to the popular use of metaphors in service design, there are many examples of metaphorical relations to describe varieties of organizational forms (Morgan, 1980), with extensive influence both in management theory and practice.

As mentioned, we used metaphors during the Janela GNova program starting off with the idea that *experimenting is like diving*. Challenging more technocratic associations of public organizations with machines and assembly lines, and taking advantage of the widespread analogy of *immersion* in design projects in the Brazilian public sector, each stage of the project was associated with instruments or situations of a dive. In line with Lakoff and Johnson's proposition (1980), our aim was to understand and experience one thing, i.e. *to experiment in the public sector*, in terms of another, i.e. *to dive into the water*, making it easier for participants, facilitators and project managers to understand the methodology as they carried out their design project.

Beyond using the metaphor as a learning arch for the participants' experience (Kavanagh, 2019), we stretched it into the analysis of takeaways and outcomes, generating reflections to make sense of what we lived together. One year after Janela GNova ended, we were invited to write a report about the program. As part of the *Inovação na prática* (Innovation in practice) collection, the publication would draw from the documentation of the four projects, but also from complementary research. Besides a mere description of methods and cases, we saw it as an opportunity to address one of the key challenges for contemporary public management: capturing, measuring and understanding the outcomes of innovation programs.

From there, the diving metaphor worked for us as a boundary object. Following Susan Leigh Star's (1989) concept of boundary objects, the metaphor was a way to create shared meanings in collaborative work that reunited a heterogeneous group of





people with divergent viewpoints. It was at the same time situated to the specific shared experience of the program's participants, respecting local contingencies, but also allowing for cross-site and cross-discipline translations (for example, but not limited to, public innovation and service design communities of practice), as there is a common imaginary of what a generic process of diving encompasses. This approach resonates with analogous uses of boundary objects in contexts in which design facilitates interdisciplinary work while still preserving diverse meanings attributed by participants (Tharchen et al, 2020), or in capacity-building policies (Emad & Roth, 2009).

3. Diving and breathing

3.1 The Janela GNova program

While we were waiting for the start of one of the virtual meetings coordinated by the members of the GNovaLab, in the first months of the Covid-19 pandemic in 2020, a federal judge of a Brazilian Court (TRF1) told us about the advances in the digitization agenda of conciliation hearings, a fundamental step to expand the rate of case resolution of the Brazilian Judiciary. Meanwhile, a group of engineers, managers and communicators of the National Agency of Water and Sanitation (ANA) was concerned about the lack of understanding of the general public about the role of this regulatory agency, precisely in the year in which it celebrated twenty years of existence. In another branch of the federal government, civil servants from different areas of the Ministry of Justice looked at seven logic models that pointed to the challenges of implementing the national policy of missing persons. At the Ministry of Economy, an innovation team from the Department of Personnel Management was concerned with the effects that the pandemic would generate on the quality of work life of civil servants, especially in the emergency implementation of a remote work regime.

These four scenes, mediated by screens, give us a taste of what we found at the start of Janela GNova, at some point in June 2020 (a more detailed account of the projects can be accessed in Brandalise & Werneck, 2022). Mostly directly from their houses, about forty civil servants from diverse branches of the Brazilian public sector participated in the program. Janela GNova came into existence with the objective of building design and innovation capacities for civil servants through short projects in the federal government. To do so, the GNovaLab team selected four teams from various policy and service areas to be supported by the program. A dedicated team was formed for each project, and included both people from the government areas





that submitted the project, as well as members from GNovaLab, who had experience in applying design-led methods in public sector initiatives. The authors of this paper were consultants dedicated to the development and application, alongside the GNovaLab team, of a common methodological process to be shared by the four project teams.

The start of the program coincided with the beginning of the Covid-19 pandemic. Besides the high degree of uncertainty of the situation, it was the first experience of working remotely for many of the participants, which required radical adaptations in the methodology. Aware that a simple transposition of methods to online formats would be incompatible with people's availability, levels of attention and fatigue, we were guided by experimental, collaborative, and agile principles to redesign the process for the new conditions. Our aim was to be able to quickly test and learn with the people involved, and make adjustments as we carried out the process. It required the adoption of alternative management rites in-between sessions as well, to keep different teams connected yet without adding new work meetings. An example was *Radio Janela*, a short weekly audio recorded by each project manager, reporting key points of the project at that stage and the main reflections on the practice.

We designed the methodology by building on experimentation approaches previously adopted by the GNovaLab team (Ferrarezi et al, 2018; Ferrarezi & Lemos, 2018), prioritizing simplicity and modularity. Therefore, the process was divided into two cycles, each focusing on a predominant way of working (exploring and making) and divided into five stages. Each stage had a mission to guide the work and establish the creation of intermediate and interconnected deliverables.

3.2 Designing the program's methodology through the diving metaphor

We borrowed from the idea of a boundary object (Star, 1989) to establish a narrative thread between the stages, as well as to create a common language shared by the four different project teams. We did that by expanding on the diving metaphor in the design of each methodological cycle. We counted with customized illustrations by a member of GNovaLab to give concreteness to the concepts-in-action, making them more accessible and evocative.

The first cycle focused on *exploring*, which was a process of *collectively diving into the context of the public challenge* by each of the teams. We began this cycle with gathering existing data to prepare and calibrate the focus for fieldwork. Then, the government teams *entered the water*, interacting with people affected by the issue through qualitative research approaches, and collecting relevant evidence to deepen the understanding of the situation. The second cycle focused on *making*, and meant creating something tangible that could serve as a reference point for the team to





approach the issue and interact with the environment. In the second cycle, the dive was associated with testing. The teams were guided by insights gathered in the first dive to *create and take prototypes into the water*, in order to interact with and learn from people potentially affected by it in everyday life.

Preparation Project focus Fieldwork Synthesis Presentation of insights MAKING CYCLE Preparation Focus Tests Synthesis Final presentation

Figure 1. Diving cycles and stages. Illustrations by Arthur Pomnitz.

We encouraged the framing of projects to be in the scale of an artifact or service, in order to bring the issue closer to the field of possibilities of action of the teams, and to point to concrete outcomes at the scale of public policy or systems. The diagram below demonstrates the interconnected scales of the program: artifacts, services, policies, and systems (inspired by Young et al., 2001). Within the diving metaphor, these can be seen as dimensions of *ripple waves*. When we talk about artifacts, we are referring to tangible products, points of contact between an audience and a service or public policy offering, and it is the most concrete and specific scale of our diagram. Services consist of experiences comprising different situations and artifacts arranged in a temporal sequence. Public policy potentially involves different services and coordinated actions to achieve a certain public effect. Systems, the broadest scale in the diagram, comprehend all the other elements and are configured as a set of relationships among components – policies, services, artifacts – intertwined with multiple actors. The navigation between micro and macro scales was especially





relevant in the moments of strategic reflection with the teams, when thinking of concrete actions without losing sight of a broad view of each issue.

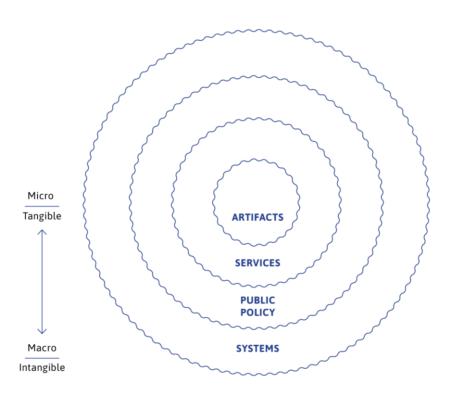


Figure 2. Project scales as rippling wave effects of the Janela GNova program.

3.3 Analyzing the program through breaths

To make sense of what happened with the projects after the Janela GNova program, we conducted group interview sessions with participants from each project. Our aim was to collect material to write cases and produce cross-cutting reflections about their implementation. We did not intend to formally evaluate the projects nor the program, but to explore new dimensions for comprehending the effects of programs alike. We were not yet aware of the new possibilities of the metaphor at this stage, after we had returned from the diving cycles. Thus, we asked teams the following questions: (i) How are you telling the story of the project? (ii) How did the organization absorb outputs and learnings? (iii) What changed for the participating teams in terms of behavior, methods and attitudes? (iv) Were there any unexpected, surprising developments?

As we collected perspectives from the teams on the meaning and effects of the experience, we had several sensemaking workshops and conversations with the lab's team. Through this process, we identified many different dimensions and





evidence of the program's effects that are apparently difficult to notice and capture. Therefore, we brought back the metaphor of diving, working as a boundary object to help us further extrapolate on the learnings collectively and without recurring to traditional logics and languages of evaluation. By doing so, it was possible to bring onboard people from different organizations, fields and roles without engaging in epistemological debates about policy evaluation. We took advantage of the fact that being underwater allows for new logics to take place, influencing the direction of movement and the interplay of gravity, visibility etc.

During the program, we facilitated sessions after each of the cycles, creating moments of reflection-in-action, in a reference to Donald Schön's (1984) approach to reflective practice. As we revisited the documented material, and interacted with participants more than a year after the program was over, we relied on a different mode of reflection, i.e. reflection-on-action. At this moment we understood that reflecting is like breathing, be it underwater or when returning to the surface. It is a necessary condition for the practice of experimentation in the public sector. The association of reflecting with breathing has allowed us to further extrapolate from the findings of the analysis, giving language to perceptions about the project, its conditions and outcomes – or what we came to talk about in terms of bubbles, currents and splashes.

4. Bubbles, currents and splashes

The reflective breathing exercises changed the way we saw the projects, their conditions for successful unfolding and possible outcomes. In this section, we bring some of the main insights identified from the diving analogy, presented here as new concepts based on the deployment of the metaphor as methodology.

4.1 Bubbles

By observing the mutual influence between teams and the institutional culture and structures in which they were embedded, we came across the idea of *the project as a bubble*. Resembling a bubble, each design-led project aimed at creating safe conditions for experimentation and learning. The layer that separates context and project is so thin that sometimes one can not even notice it. A bubble is a temporary space, permeable and translucent, able to move into different directions in non-linear trajectories. In essence, the program format sought to generate a sense of protection, while at the same time the team continues to live and interact with its surroundings. This permeability to the context proved to be a very effective attribute to induce learning not to be restricted to an environment detached from reality. On



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the contrary, during the months that people participated in the program, there were exchanges between the inside and outside of this bubble, exercising the team's ability to absorb and translate new practices of experimental, agile, and collaborative work. However, the existence of the bubble needed to be protected at times when the pressure from the surroundings is so strong that it can precipitously break through its wall – which is made, after all, of ephemeral and fragile matter – with the risk that the everyday imposes itself on the learning space, compromising its safe and bounded condition.

4.2 Currents

A project participant told us: "Now I don't launch any product, not even an internal one, without testing it". The creation of a common repertoire of prototyping and testing practices made it possible not only for this specific participant to change her ways of working, but also involve more people from the organization. The adoption of such practices – incorporating methods, attitudes and languages – after the projects are finished could be related to the logic of water currents. When underwater, things move according to different streams which, in the case of the public sector, are usually informed by knowledge fields such as law, economics, social sciences and management, but also by practice fields such as participatory design, open government, plain language etc. After running the project-based learning program Janela GNova, there were a set of design practices that became as strong as currents, exerting more influence over how other teams in that organization do their work. Based on the know-how accumulated through the program, teams incorporated and disseminated practices such as facilitating online workshops, framing problems or testing ideas with people affected by the problem. The development of innovation skills begins at the individual level; however, the more incorporated into the collective memory, the stronger are the chances of extrapolating its individual use. Beyond proposing specific techniques to be learned by a single person, the program contributed to creating a shared and situated repertoire. In that way, more than trying to find the best diving equipment – an analogy for tools and techniques, for example - teams started to feel more comfortable in being underwater, simply incorporating experimental practices into their work routines. These work practices do not necessarily generate direct results for policies and systems; however, as shifting *currents*, they can function as enablers of wider effects.

4.3 Splashes

Some participants told us that processes of institutional transformation started to take place after the program was over. When we asked about what had happened since then, we received highly diverse responses in terms of the types and formats of





outcomes. Following the metaphor, we understood such diffuse outcomes observed as *water splashes* that spread after diving. Splashes are not directly generated by the program, but are observed within the timeframe of the after-project, in varied sizes and shapes. They tend to be less tangible, gaining visibility with distance and a closer investigation of aspects that exceed or escape the linear sequence between design and implementation. To explore different conceptions of splashes in terms of the success and effects of the program, we return to the ripple diagram.

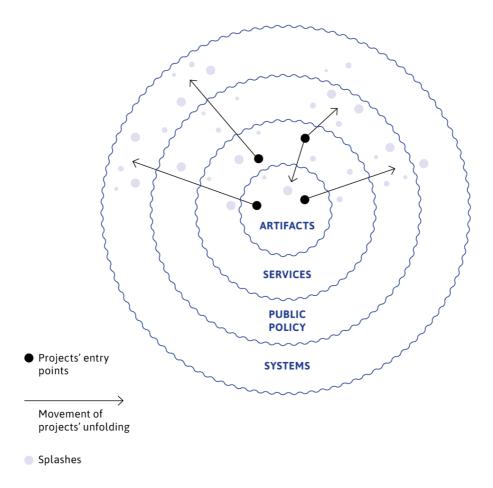


Figure 3. Splashes as evidence of collective learning.

The development and implementation of the final delivery of a project is a more common and straightforward conception of success. It points to the effects in a linear continuum, which would be assessed through evaluation metrics to check if the project "worked". In the diagram, this idea is represented by the movement of the arrow that departs from each initiatives' entry point, linking to the further development of the intervention that was created by each team within the Janela GNova program. This is an important dimension of an outcome, because it attests that projects focused on learning can also bring concrete outcomes in terms of implementation of



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planned interventions. An illustration of these effects was the creation of the National Policy for Missing Persons, the Plain Language Action Plan, the guidelines for the regulation of non-face-to-face work, and the expansion of the new procedural rite of conciliation for special cases of social security.

Beyond such outcomes, which are more commonly explored in the literature of the fields of public administration, social and service design, we are interested in elaborating on the splashes that we noticed. These are events that might indicate evidence of collective learning often overlooked or disregarded as non-related to the design process. In a preliminary attempt and in reference to the diagram, we looked at the areas surrounding the arrows, trying to identify splashes (lilac dots) that might emerge in different formats and sizes, more or less related to the movement of the project through the line of its development and implementation.

The effects at the scale of public policy or systems, often less clear, can also indicate some kind of continuity from the entry point of the project. These are institutional splashes, and evidence the incorporation of project effects and learning by the organization over time, which could be more related to the projects themselves or to the currents they generated through new work practices. Splashes are associated with what happened in the Janela GNova, but go beyond the linearity characteristic of programs in the public sector, frequently represented in the form of ducts and tubes that lead all through the same flow. One participant from a partner team reported: "What I see is that what we formulate is not always exactly what will end up in the 'final thing', but it would never exist without this initiative [...] and the insights that we identified are being implemented over time... Some already have been, some still will be". An example was the use of intermediate products of the process – such as the return to the fieldwork insights mapped in the Ministry of Economy project – which became a key reference to help the team develop new initiatives after the project, exploring possibilities in addition to the focus initially given.

We also observed manifestations of institutionalization by the project teams based on their own local conditions. These movements mean a dialogue with an organization's culture and available resources, such as the creation of normative acts, plans, positions, and administrative rites. Here we can cite the Ministry of Justice team, which highlighted the creation of a specific position in the formal structure as an important victory to institutionalize the Missing Persons Policy. Signs like these show incremental change brought about by the projects' actions. In other cases, we noticed even more profound changes, or what the ANA project team named as "a true institutional transformation", including the creation of new products and normative acts with special attention to effective communication with the public, and the incorporation of experimental ways of working in the routine of ANA's teams.





5. Conclusion

We presented the use of the metaphor of diving in the public innovation program Janela GNova, which we carried out alongside the GNovaLab team at Enap in 2020.

As a boundary object, a concept that is "both plastic enough to adapt to local needs and constraints of several parties employing them, yet robust enough to maintain a common identity across sites" (Star, 1989, p. 46), the metaphor has allowed us to design a shared process, creating a common language between groups of participants from different areas of the Brazilian government, as well as to assess it, reconciling evidence from heterogeneous sources. It created an embodied and reflective process that recognizes the "diverse spatialities and temporalities that are at play in the outcomes of designing and examining how responsibilities for these outcomes are identified, negotiated, and assessed" (Julier & Kimbell, 2019, p. 21).

Beyond connecting different areas of government, the metaphor also created a common ground to the miscommunication often experienced between the contrasting social innovation and service design terminologies (many times untranslated anglophone terms, like blueprint, toolkit, canvas, and sprint) and the everyday language used by civil servants in the Brazilian public sector. Additionally, we might argue in retrospect that the metaphor actually worked as an *interactive* boundary object, as described by Tharchen and colleagues (2020). In other words, like a boundary object, it enabled different meaning structures to co-exist and co-inform participants from diverse worldviews and perspectives, but it was not fixed. It offered, instead, opportunities for imagination, inquiry and action through its open-endedness and generative qualities.

As mentioned in the introduction, there is a growing demand for evaluating government labs, which are often skeptically assessed through traditional methods and linear perspectives. Often associating the work process with assembly lines, those views impoverish the possibilities to explore emergent outcomes when looking for success. Adopting a metaphor has allowed us to identify more granular and usually overlooked outcomes of the process. The preliminary results presented helped us to identify splashes as outcomes, and bubbles and currents as conditions. Following from there, we envision opportunities to further explore terms and ideas within the metaphorical realm that might give more nuance to inquiries in this space.

However, as situated concepts-in-use, we observed that metaphors have limits. There is a balance in the use of a metaphor *just enough*, critically acknowledging the extent by which it can be adopted as lenses for conception, reflection and analysis. We noticed that when we elaborated on the metaphor in excess, or at moments





when it became too much the center of the conversation, it started to become dysfunctional as a boundary object. In those situations, people started translating what they were doing in terms of metaphorical language, almost as a replicable toolbox (Townsend, 2016), with the risk of becoming a mere tool for engagement and spectacle.

Additionally, it is important to emphasize that metaphors are necessarily partial lenses. They allow us to see something in terms of another, implying that we leave things out of that knowledge system – otherwise a metaphor loses its point. "If it were total, one concept would actually be the other, not merely be understood in terms of it" (Lakoff & Johnson, 1980), just like in the relationship between a map and a territory. Beyond the metaphorical understandings, we encourage the experimentation of complementary methods and approaches to conceptualize and assess design-led programs, in order to find other granularities and angles of analysis that might be more suitable to each given context.

This process has also allowed us to expand our understanding of the situatedness of government initiatives, which need to attune to institutional logics and multi-actor structures to be effective. By analyzing the scales in which the Janela GNova program worked through the ripple effect diagram, it became evident that "there is a need for a more nuanced understanding of the characteristics of institutional arrangements as design materials and the implications of those characteristics on how actors can intentionally shape them" (Vink et al., 2021, p. 180).

Finally, we hope to contribute with this practical case of a government innovation lab in Brazil to further explorations of critical accounts of metaphors as methodology in systemic conceptualizations of service design and their applications in the public sector.

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References

- Akama, Y. (2009). Warts-and-all: the real practice of service design. In *First Nordic* conference on service design and service innovation (pp. 1-11). The Oslo School of Architecture and Design.
- Acevedo, S., & Dassen, N. (2016). Innovation for Better Management. The Contribution of Public Innovation Labs. Technical note n. IDB-TN-1101. *Banco Interamericano de Desarrollo* (BID).
- Brandalise, I. & Werneck, C. (2022) Entre mergulhos, respiros e respingos: inovação pública para aprendizagem coletiva. Brasília: Escola Nacional de Administração Pública (Enap).
- Emad, G., & Roth, W. M. (2009). Policy as boundary object: A new way to look at educational policy design and implementation. *Vocations and Learning*, 2, 19-35.
- Ferrarezi, E. & Lemos, J. (2018). *Imersão ágil: checagem de realidade em políticas públicas*. Brasília: Escola Nacional de Administração Pública (Enap).
- Ferrarezi, E., Lemos, J. & Brandalise, I. (2018) *Experimentação e novas* possibilidades em governo: aprendizados de um laboratório de inovação. Brasília: Escola Nacional de Administração Pública (Enap).
- Ferrarezi, E., Brandalise, I., & Lemos, J. (2021). Evaluating experimentation in the public sector: learning from a Brazilian innovation lab. *Policy Design and Practice*, 4(2), 292-308.
- Ferreira, M., & Botero, A. (2020). Experimental governance? The emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, 3(2), 150–162. https://doi.org/10.1080/25741292.2020.1759761
- GNova. (n.d.). *Quem somos?* Retrieved October 23, 2022, from https://gnova.enap.gov.br/
- Julier, G., & Kimbell, L. (2019). Keeping the System Going: Social Design and the Reproduction of Inequalities in Neoliberal Times. *Design Issues*, 35(4), 12–22.





- Kavanagh, S. (2019). Learning Arch Design: A Method for Unlocking Student Engagement and Ownership of Learning Through Packaging the Pursuit of Knowledge & Creating a Call to Adventure. Kaospilot.
- Lakoff, G., & Johnson, M. (1981). *Metaphors we live by*. University of Chicago Press.
- Lewis, J. M. (2021). The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, 4 (2), 242-251.
- McGann, M. Wells, T., & Blomkamp, E. (2021). Innovation labs and co-production in public problem solving. *Public Management Review*, 23 (2), 297-316.
- Morgan, G. (1980). Paradigms, Metaphors, and Puzzle Solving in Organization Theory. *Administrative Science Quarterly*, 25(4), 605. doi:10.2307/2392283
- Mortati, M., Christiansen, J., & Maffei, S. (2018). Design craft in Government. In *Proof of Concept. ServDes 2018 Conference* (pp. 561-571).
- Schön, D. A. (1984). *The Reflective Practitioner: How Professionals Think in Action*. Basic Books.
- ServDes.2020. (2021, February 4). *Metaphors of Service* [Conference video recording]. Retrieved from https://servdes2020.org/events/16-metaphors-ofservice
- Star, S. L. (1989). The structure of ill-structured solutions: Boundary objects and heterogeneous distributed problem solving. In *Distributed artificial intelligence* (pp. 37-54). Morgan Kaufmann.
- Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social studies of science*, *19*(3), 387-420.
- Tharchen, T., Garud, R., & Henn, R. L. (2020). Design as an interactive boundary object. *Journal of Organization Design*, *9*, 1-34.
- Townsend, S. (2016). Re-reading Design Methodology and the "Toolbox" Metaphor. *Design and Culture* 8(2), 199-204.





- Vink, J., & Koskela-Huotari, K. (2021). Social structures as service design materials. *International Journal of Design*, 15(3), 29-43.
- Vink, J., Koskela-Huotari, K., Tronvoll, B., Edvardsson, B., & Wetter-Edman, K. (2021). Service Ecosystem Design: Propositions, Process Model, and Future Research Agenda. *Journal of Service Research*, 24(2), 168–186.
- Werneck, C., Ferrarezi, E., Brandalise, I., Vaqueiro, L., & Bonduki, M. (2020). *Life Cycles of Public Innovation Labs*. Brasília: Escola Nacional de Administração Pública (Enap).
- Wellstead, A., Gofen, A. & Carter, A. (2021). Policy innovation lab scholarship: past, present, and the future Introduction to the special issue on policy innovation labs. *Policy Design and Practice*, 4(2), 193-211.
- Young, R., Blair, S. & Cooper, A. (2001). Redesigning design education: the next Bauhaus? In: Exploring emerging design paradigm, Proceedings of *ICSID Educational Seminar 2001, Seognam, Korea, International Council of Societies of Industrial Design*. Korea Institute of Design Promotion, Korea, pp. 26-33.