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**Theatres of algorithmic transparency:  
a post-digital ethnography**

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A thesis submitted in partial fulfilment of the requirements for  
the degree of Doctor of Philosophy in Interdisciplinary Studies

Centre for Interdisciplinary Methodologies  
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## Abbreviations

Admission Post-Bac | Admission Post-Baccalaureate | APB

Administrateur Général des Données | Chief Data Officer | AGD

Artificial Intelligence | AI

Appel à manifestation d'intérêt sur l'intelligence artificielle | Call for expressions of interest on artificial intelligence | AMI IA

Agence Nationale de la Sécurité des Systèmes d'Information | National Cybersecurity Agency of France | ANSSI

Baku–Tbilisi–Ceyhan Pipeline | BTC pipeline

Centre for Interdisciplinary Methodologies | CIM

Commission d'Accès aux Documents Administratifs | Commission of Access to Administrative Documents | CADA

Code des Relations entre le Publics et l'Administration | Code of Relations between the Public and the Administration | CRPA

Direction Générale des Finances Publiques | General Directorate of Public Finance | DGFIP

Direction Interministérielle du Numérique et du Système d'Information et de communication de l'État | Directorate of Digital and State Information and Communication System | DINSIC

Direction Interministérielle de la Transformation Publique | Interministerial Directorate for Public Transformation | DITP

Fondation Internet Nouvelle Génération | Internet Next Generation Foundation | FING

Freedom of Information Request Act | FOIA

Laboratoire Intelligence Artificielle | Artificial Intelligence Laboratory | Lab IA

Science & Technology Studies | STS



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## **Declaration**

This thesis is the authors' own work. No part of the work referred to in this thesis has been submitted in support of an application for another degree or qualification at this or any other university or institute of learning.

## Abstract

This thesis investigates how algorithmic transparency is performed in French public sector organisations. I analyse the practices, methods and performative style of public disclosures in an ethnography initiated at Etalab — the French Open Data task force — and conducted in 2018. The study starts by considering recent controversies about unfair administrative algorithms. This research shows that to be effective, calling for algorithmic transparency requires the *staging* of identities, issues and algorithms. I describe how information about algorithms is disclosed through the *mise en scène* of citizens' motivations, the placing of controversial requests on public bodies, and a regulatory framework redefining administrative procedures as “algorithms”. In a second empirical chapter, I unpack the dispute about unfair calculations of the housing tax. This dispute provides an opportunity to understand how the performance of transparency is purposefully planned by Etalab and the General Directorate of Public Finance. When these two organisations realise that full accountability of the housing tax algorithm is impossible, they set the boundaries of what should be made public. I posit that to be performed, algorithmic transparency requires the *negotiation* of its limits and the *scripting* of disclosures. I then study how the housing tax algorithm was disclosed in practice. Since full accountability is not attainable, algorithmic transparency is not longer defined as a bureaucratic duty but performed through a proclaimed *exemplarity*. Disclosures provide occasions for actors to brand transparency as an honourable achievement, but one that is disconnected from accountability requirements. On this basis, I develop the argument that algorithmic transparency is best understood, not as an accountability device, but as a political force shaping new narratives about public sector digitalisation. The performance of algorithmic transparency serves as an incentive to reorder public services, and, an attempt to refresh the technologies supporting administrative action in the public sector.

## Chapter 1: Introduction

On Friday 19<sup>th</sup> of October 2018, I was accompanying the strategic counsellor of the French Open Data task force, Isidore Baudoyer<sup>1</sup>, to a meeting at the early childhood directorate of a French metropole. Together, we had spent the previous day preparing a deck of slides that presented a section of the 2016 Digital Republic Bill. Our presentation focused precisely on a part of the Bill providing new legal obligations for administrations<sup>2</sup> to improve the transparency of their algorithms. Commonly known as “Etalab” — a portmanteau signifying “State-Laboratory” — the task force Baudoyer is part of was in charge of advising administrations in the accomplishment of their new duties in line with this new regulation.

The objective of the meeting in this municipal early childhood directorate was twofold. Firstly, we wanted to test our presentation in order to assess whether the analysis of the regulation we had produced was understandable by a civil servant. The law articles enforcing the regulation were not easily legible and comprehensible — even for professionals with a good legal knowledge. The aim of our deck of slides was to provide a simplified and intelligible version of these articles. The pedagogical objective of the meeting was then important since on the national scale more and more citizens were facing the opacity and agential power of public sector algorithms (Chignard and Penicaud, 2019; Cellard, 2019). It was crucial that administrations remained informed.

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1 - For the sake of care and privacy, I have chosen to pseudonymised all the close collaborators encountered in the fieldwork. The names chosen to designate them are borrowed from the novels of Honoré de Balzac and randomly attributed. The surnames of collaborators may be added exceptionally and only as sources to indicate important contributions (i.e. the publication of an article). The only people who keep their real names are public figures: the head of Etalab Laure Lucchesi, DINSIC director Henri Verdier, the Ministers of Digital Affairs Axelle Lemaire and Mounir Mahjoubi, the Minister of Public Finance Michel Sapin and French presidents Emmanuel Macron and Nicolas Sarkozy. Since, my data has been generated from ethnographic methods that include interviews and observation, to conduct this ethically, I produced a research overview sheet for interview participants to read and an informed consent form for them to sign.

2 - When I use the word “administrations” I refer to State services or public sector organisations. It is a short-hand used in French to designate public bodies who exercise an administrative power, for example the administration of taxation, estates, customs, justice, post offices...It is the word used by actors in the field.

Furthermore, the topic of algorithmic decision-making in administrations is new to most civil servants. Despite the current hype around the use of artificial intelligence (AI) for the “public good” (Bourne, 2019), algorithms are often seen as dry and boring tools: mathematical formulas lost inside an incommensurable administrative technocracy (Barraud, 2018). If there is maybe a growing adoption of algorithmic modes of decision-making in administrations, the term “algorithm” is not always the one used by civil servants. What we now called “algorithms” are often present and designated as expert systems, simulators, softwares, grids of criteria, scoring mechanisms, decision-trees or automated decision-making systems (ADMS). Explaining algorithms is hard and not yet part of a bureaucrat day-to-day routines (Alkhatib and Bernstein, 2019). As expressed by the President of the French administrative regulator, Marc Dandelot, the lack of interest and care for algorithmic transparency is partly due to “the difficulty of properly perceiving the rules of a law that has become very complicated due to a multiplicity of special legislation” (Dandelot, 2018, p.129). Therefore our first aim in going to this early childhood directorate was to give nursery managers a simple understanding on their new legal obligations — for example, what types of algorithmic decision-making they have an obligation to communicate to the wider public— and what do citizens have the legitimate right to be informed about ? The deck of slides was our device to test the intelligibility of this new regulation.

Our second objective in coming to this meeting was to consider if the allocation of daycare places in nurseries could be an interesting field of intervention to improve the transparency of public bodies’ algorithms. We could respond to this question only if we were first sure that the allocation of daycare places in nurseries could be understood as an “algorithm” according to the new regulation. Our intuition was uncertain because the new regulation did not provide a clear definition of what counts as an administrative algorithm. Despite its common understanding as a computational tool instantiated by lines of

programming code, the stability of what the word “algorithm” refers to has never been straightforward, as has been made clear in recent research (Seaver, 2017; Sack, 2019, pp.79–106; Amoore, 2020). Even the lawyers from Etalab we consulted in order to prepare our meeting at the childhood directorate were not aligned on what an algorithm allocating places in nurseries could look like. If an “algorithm” may operate in the allotment of places in nurseries, its precise material manifestation may not be clear.

We knew that determining the algorithmic nature of the allocation of daycare places would require an investigation. The meeting was, then, a first approach to understand more about how the public childcare market is technologically operating in a French metropole: is there indeed an “algorithm” matching demands from parents with available places in nurseries? If yes, on which criteria the “algorithm” is ranking the requests? And how is this “algorithm” materialised? Is it a software or a web application? Is it a centralised system operated by an external provider or a set of decentralised tools in each nursery? Is the allocation fully automated or are there civil servants in this algorithmic loop? If there is no algorithm inside this administrative procedure, then how does the allocation work? Was it through deliberations, where directors of nurseries explain their needs and priorities? These were the types of questions we had in mind before the meeting. Consequently, we were prepared to learn that an “algorithm” allocating places in nurseries is not a straightforward matter and that the word “algorithm” might point to many different material tools and processes.

We got to the childhood directorate a little early. In the building entrance, a staff member directed us to the second floor. I did not know exactly who was going to be at that appointment other than the director of operations in charge of coordinating all the daycare spaces in the city. When we arrived on the second floor, we waited at the top of the stairs, a bit on the left. It must have been 8:30, and I wouldn't have said no to a second coffee to heighten my

ethnographic attention. After five minutes of waiting, a ruckus coming up the stairs woke us up: we thought it must be for us. We got up from our bench and stood at attention.

Arriving at the first floor, we could hear the laboured breathing of the person coming up the stairs. Almost at our height, we saw a woman in her forties, with medium-length brown hair tied back and heavy black eyeliner. She was visibly a little embarrassed by her tardiness but still smiling, even cheerful. Breathless, she reached out her hand to Isidore, looked at us both and said: "Ah, you must be the gentlemen coming for the algorithms?". Isidore and I were immediately intrigued and somewhat taken aback by the question, but we introduced ourselves anyway and pardoned her for being late.

As we followed her down the hallway to the meeting room, Isidore and I looked at each other with a gaze of complicity that wanted to ask: "Are we the gentlemen of algorithms? What did she mean? The two men in black coming to neutralise bureaucratic aliens? The new white-collar plumbers coming to fix administrative algorithms? Which algorithms is she talking about!?". At this early stage, we did not know even what an "algorithm" for allocating places in nurseries was or could be. Our surprise came from the fact that the word "algorithm" had been used before we even had time to introduce what this uncertain notion meant in the 2016 Digital Republic Bill and without any investigation that could assess the technological mechanism of allocating places in nurseries.

Our surprise first came from the setting of the scene. To talk about algorithms in the corridor of a local public sector organisation dedicated to child care seemed to us rather unexpected, strange, exotic, even close to inappropriate: a telescoping of imaginaries where baby cries and algorithmic proceduralities mingle.

Later in the day we understood that Lauren, the woman who welcomed us, was in charge of the municipal service collecting demands of parents requesting a place for their children. During the meeting as well as during the whole period where I followed Baudoyer in this investigation, the nursery managers I encountered used the word “algorithm” to refer to the general procedure operating the matching between the wishes from parents to place their children in a particular nursery and the available places. When they used the term “algorithm” as an explanatory scheme, it appeared that Lauren was in charge of the information collection about parents: what comes in the algorithmic procedure as a “data input” (i.e. income, number of children).

This anecdote draws a contrast between, on one side the current pervasive “terminological anxiety” (Seaver, 2017, p.2) attached to what algorithms are, and on the other side, the enthusiasm and confidence of a civil servant naturally defining her childcare allocation system as an “algorithm”. What surprised us is that this nursery manager did not feel to be an outsider to this notion, while on the contrary, we were in the fog because not having a clear legal definition of algorithms complicated our tasks to identify the specificities of algorithms from public sector organisations. It is just as if she knew before us that an algorithm was there. Mundane managers and citizens live among the reality of administrative algorithms, have opinions about them, do their jobs with them, and naturally witness their direct effects. Indeed, the way this nursery manager performed the presence of an algorithm indicate that she wanted to demonstrate her algorithmic knowledge or understanding of the regulation in front of us. While we were supposed to be the algorithmic experts, inside her own corridor, we felt like amateurs.

The performance of the algorithmic discourse by Lauren is probably caused by the investigation that Isidore Baudoyer and I had just started. It is



because we presented our request for an appointment with the early childhood directorate in this algorithmic register that Lauren and other nursery managers adopted this voluntarist discourse in favour of improving the accountability of their allocation mechanism. Indeed, what I came to understand months after this meeting is that the naturalisation of algorithmic discourse in the corridor of a nursery may well be a transformative effect of the new transparency regime — the regulation provoking Baudoyer’s initiative to meet and investigate this allocation mechanism. As I will explain in the first empirical chapter the notion of “algorithm” as understood by the regulation became a short-hand to describe the procedure of allocation regardless of its technological materiality. Consequently, the use of the label “algorithm” as a heuristic device was an occasion for Baudoyer to rethink the organisation of allocations through an algorithmic formalism: the procedure was seen as a set of iterative instructions; a recipe; a computational procedure involving technologies and civil servants.

Contrary to many other studies, in my inquiry I have found that the object of transparency is not fixed, and that this vagueness is an occasion to reorder organisational realities. The concept of “algorithm” could then be a discursive device of transformation — a way to put in circulation and sustain the belief that State algorithmisation is achieved and must continue — and not simply a material technology operating as an allocation mechanism.

Indeed, in this thesis I investigate how transparency is not just a means to improve the understanding of an administrative procedure, but a practice performed to transform its environment. Indeed, the hypothesis guiding my thesis is that transparency is not only a mechanism designated to improve accountability, but a political force reframing strategies about the digitalisation of administrations, reordering relations with citizens, the expertise of civil services, as well as the infrastructures supporting administrative actions. Figuring administrative procedures as “algorithms” may naturalise a vision of administrative actions as inherently data-driven and it is possibly an occasion to

rebrand state actions in machinic terms (the State becomes then a computational platform) and a way to advocate the hiring of more data scientists into public services.

In the visit narrated above, I came to understand that my object of inquiry, the algorithm, was a “performed” entity, a figure with many definitions and subjected to constant tests of actualisation (Muniesa, 2011; Ziewitz, 2017). Moreover, following the sense of surprise stemming from the nursery manager’s question, I embarked on a wider investigation regarding the circulation of “algorithms” in French public life and their roles as entities endowed with explanatory powers. My fieldwork took place in this wider domain, but while I could not follow all the instances of what “algorithms” refers to in all French public sector organisations my investigation was centred on the staging of algorithms in contexts where French administrations are made accountable for their algorithmic-decision making. Put differently, as I could not make sense of all the emergent folk theories of algorithmization and their effects across the French public sector, as we will see in the first empirical chapter, my attention has focused on situations in which the entity “algorithm” has been performed in response to citizens contestation of administrative decisions. My concern is therefore more strictly on how the discursive enactment of administrative procedures as “algorithms” will orient the achievement of transparency and public accountability. My intuition is that depending on how procedures-as-algorithms are understood, transparency will be performed in very different ways. There is a relation between how a nursery manager can make sense of her mechanism allocating daycare places and how a regulation enforcing algorithmic accountability can be applied.

The research that forms the basis of this thesis took place in a particular moment, in which citizens in France and elsewhere increasingly expressed a political desire to have a better understanding of algorithmic systems. When we

met this nursery manager, there was a major controversy on going in France around the unfair allocation of students into universities due to a State-deployed algorithm (Frouillou et al., 2019). After my baccalaureate, in the anxiety of the 2009 economic crisis, I became part of the first generation of students governed by this system. To cope with such complex State system, the regulation we came to present at this childcare directorate aimed at introducing a new Right to Explanation of algorithmic decision-making. Consequently, in France, resolving the “algorithmic drama” (Ziewitz, 2015) faced by many liberal-democracies today focused on the provision of more intelligible administrative procedures. But as we have seen with this opening anecdote, the materiality of algorithms and their modes of participation in administrative decision-making can be unclear and difficult to communicate. The need to cope with this difficulty may be considered as a justification of Baudoyer’s inquiry in nurseries. Using the rationale of algorithmic transparency, a public service is being transformed. My thesis is therefore about the performances of algorithmic transparency — the style and methods of its conduct — taking place in French administrative contexts and inquired through an ethnography in and around Etalab, the French Open Data task force. Put differently, the core question investigated in my thesis is the following: how is algorithmic transparency performed in French public sector organisations — in order to have transformative effects? I will now introduce some of the personal experiences that informed the research presented in my thesis.

### **From architectures of information to visibility performances**

The central concern in this thesis is the political effects of algorithmic transparency initiatives, as well as the performative modes of their conduct. How a public transparency initiative can be inquired? Are disclosures configured to improve accountability or to maintain ignorance? What

unexpected effects could a regulation have in the transformation of public sector environments? These initial questions have been rooted in my personal trajectory: they are informed by my experience as a research assistant at the *Fondation Internet Nouvelle Génération* (Internet Next Generation Foundation, FING), where I worked on improving “data literacies” of civil society communities through the creation of local “datalabs”. While I was conducted this work on an apprenticeship contract throughout the year 2012-2013, I encountered Isidore Baudoyer as the main consultant and advocate of the burgeoning field of Open Data in France. Working at this think-tank, I witnessed how the claim for more transparency served as a powerful motivation to justify the development of Open Government policies. These policies now constitute a new technological mode of governance in France that is ostensibly aimed at promoting and enhancing: the transparency of public action, in particular by opening up public data; as well as citizen participation in the development and evaluation of public policy; and finally, the use of new technologies to realize more State openness and accountability<sup>3</sup>. A consortium of more than seventy liberal democratic countries is developing such types of policies. These countries initiated a partnership in 2011 and meet every two years at the Open Government Partnership Summit (OGP). It is then as part of the OGP and on behalf of the French government, that Etalab is developing programs of action fostering State transparency. As I will explain it further down, Etalab is the organisation where I conducted my ethnography, it is a task force attached to the services of the French Prime Minister.

After having left FING, I continued to develop on a higher level my intellectual and political interests on transparency and related topics. Enrolled in an Information Architecture Master at *École Normale Supérieure*, I engaged with the literature about transparency in architectural *avant-gardes* (i.e. Aloa, 2008; Colomina, 2019) as well as the branding of this concept in information

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<sup>3</sup> - For more information see the presentation of the OGP on Etalab's website: <https://www.etalab.gouv.fr/ogp>.

design (i.e. Arnall, 2013; Black, 2019). At the end of this exploration, I came to envision that transparency could be then performed through material architectures (i.e. devices, infrastructures, software) and put in practice by progressive policies (i.e. regulations, rights, ethical codes). How could the materiality of transparency realise or problematise political agendas in digital contexts? What aesthetic or performative style a set of transparency initiatives will enact? These two interrogations nurtured the current work: they are interrelated questions that shaped my personal trajectory and found coherence in this study. Indeed, as I will discuss in the literature review (Chapter 2), they constitute a tension between *transparency as a practice* and *transparency as a performance*. While, the first is a means towards more accountability achieved through the use of legal and technological devices, the second is *a staging* of what is made visible.

When in 2018, Baudoyer became the main collaborator of my ethnography, the early utopian vision we had in 2012 — of transparency as an egalitarian mechanism of reducing information asymmetry — gave way to questioning how the regulatory implementation of this concept leads to unexpected effects reinforcing power asymmetries. It is this question of how transparency was materially and discursively configured and had transformative effects that especially motivated my ethnographic inquiry. If German design pioneers performed and demonstrated their obsession for transparency through steel and glass architectures, how then has the datafied and post-WikiLeaks society created an “information architecture” to perform the so-called democratic “virtue” of transparency?

Since ethnography does not come without surprise and generative reorientations, my fieldwork rapidly transformed this initial question. I came to believe that the practice of transparency is less a question of architecture — the creation of robust accounts through technological means — than a matter of performances: the staging mechanisms (that may include technologies) used to

make these accounts *appear as* “robust”. Indeed, the emergence of the algorithmic transparency issue in France (narrated in Chapter 4) prompted my realisation that transparency was impossible without the staging of citizens, issues and even the objects of transparency. The opening anecdote testifies of a bifurcation in the orientation of my research: in the attempt to be made transparent, administrative procedures first had to be performed as algorithms.

Investigating the transformative power of algorithmic transparency is important because we need to understand its enactment not simply as a form of communication reducing information asymmetries, but as a technique for the re-organisation of practices and relations. Indeed, the performances of algorithmic transparency might constitute: a political force shaping new narratives about the digitalisation of administrations; an incentive to reorder public services and their expertise; and finally, an attempt to refresh the technologies supporting administrative actions. How to study this political transformations? What approaches and research sensibilities can enable us to analyse the transformative power of algorithmic transparency? In the next section, I respond to these questions by introducing my performative approach to the study of transparency.

### **Investigating transparency: a performative approach**

Whether they are grounded in the humanities, social sciences or engineering, most studies of transparency are evaluative: they seek to judge the effects of transparency (Albu and Flyverbom, 2016). Such evaluations of transparency often seek to assess its political efficacy. Classical evaluative studies run a particular risk: they may easily end up feeding endless debates about more information access (how far should we open algorithms?) and more literacy (how to improve the algorithmic knowledge of citizens?). In this respect, these studies suffer from a blindspot for the transformative effects of

transparency (Flyverbom, 2019) and do not sufficiently question the political effects of State algorithmisation (Pasquale, 2019). Nevertheless, the evaluative approach should be taken seriously since it is aligned with the actors' theory of change: the belief that more transparency leads to more accountability and trust. The debates about data access and literacy is for example what occupied me and Baudoyer when we both worked at FING. To be sensitive to the evaluative approach is also to respect the day-to-day efforts and policies many actors and institutions put into achieving algorithmic accountability. It is a precondition for an empirical work attuned to the points of view of actors under study.

Inspired by some performative studies of organisational transparency (Albu, 2014; Flyverbom, 2019), the approach adopted in this thesis has the potential to enrich this evaluative stance not by primarily evaluating transparency after it has been practiced, but in describing how transparency is developed *in the making* (Latour, 1987). It elaborates on how transparency is used as an affective dramatisation, how the disclosures are scripted, temporally planned, how information is staged, and finally how actors need to have a moral self-consciousness and duplicity in order to develop their actions. The performative approach also differs from the evaluative stance since its main focus is not to decide on the real achievement of transparency — in providing a judgement coming after the fact and given from the point of view of the audience — but on the processual transformation coming with transparency: an attention to the reordering of organisational imperatives coming from transparency practitioners themselves. While in the evaluative approach the concerns are “how much is disclosed?” and “is it enough?”, in the performative stance, the central question is: “how does the performative style of transparency shape the conditions of accountability, as well as reorganise a field of practice?”. The following section will address questions around the disciplinary trajectory of my thesis. More specifically, it will identify the disciplinary standpoints from

which the inquiry will be conducted, as well as to which fields of knowledge it wishes to contribute.

### **An STS inquiry**

My performative approach is rooted in two interdisciplinary lineages of Science & Technology Studies (STS). In brief, the first lineage insists on techniques configuring the “performance” of transparency (i.e. disclosures) while the second emphasises the “performativity” of these performances: their transformative effects. Indeed, the first approach is sensitive to the theatricality of practice, and emerges from historical and social studies of science (Latour, 1984; Shapin and Schaffer, 1986; Hilgartner, 2000) and research on demonstrations of technological invention and use (Smith, 2009; Coopmans, 2010; Perriam, 2018, Cornfeld, forthcoming). In my view, these interrelated researches form a single lineage because of their shared emphasis on understanding practices of knowledge and technology demonstrations as *performances*. Put differently, here performances are considered as persuasive forms of showing and hiding information. We can also call them *staged actions*.

Some researchers working in this area came to consider transparency performances as configured “theatres” for displaying evidence and triggering public experiments (Ezrahi, 1990; Law, 1994; Marres, 2012; Barry, 2013). I will contribute to this line of work in proposing the analytical tool of the “transparency theatre” and position it as a particular configuration of practices specifying the discursive, technological, social and temporal techniques used to disclose information. The theatre of transparency is then not a spatial site to be located but a set of techniques to stage performances understood as acts of disclosing. The heuristic device of the “theatre” will be useful to describe the settings of transparency performances as well as the duplicity they may impose



on actors to order the realm of what should be made (in)visible. To summarise, I will consider that transparency performances are configured by way of theatrical techniques and have performative effects of transformation.

Indeed, the second STS lineage I connect with sees performances as provocative events bringing reality about, a coming into being actualised in practice. That performance has ontological effects, it is a pervasive claim in STS that has especially occupied philosophy of science (i.e. Pickering, 1995; Barad, 2007) as well as economic sociology (i.e. Callon et al., 2007; Muniesa, 2014). What this lineage has foregrounded is the specific effects of transparency devices in forcing the emergence of the object of transparency. I suggested earlier that the new regulation aimed at improving algorithmic accountability provoked the irruption of “algorithms” inside French administrations. Here, organisational realities are brought to existence or transformed through the use of instruments and the way they push objects or things to surface. According to this view, transparency performances have a *performative effect*: making things visible is a test to make wider arrangements explicit, stabilised, and tangible. Through this exhibition process the object of transparency appears as “real”. I will contribute to this second lineage of STS research in specifying the provocative effects of the 2016 Digital Republic Bill in forcing administrative procedures to appear as “algorithms”.

In pursuing this approach, my thesis seeks to contribute to two burgeoning fields of research: Critical Transparency Studies (Steiner and Veel, 2014; Alloa and Citton, 2018; Alloa and Thoma, 2018; August and Osrecki, 2019) and Critical Algorithm Studies (Gillespie and Seaver, 2016). I seek to contribute to Critical Transparency Studies in empirically investigating how transparency is a paradoxical act that could foster secrecy and ignorance. As many ethnographies of abstract digital objects, my criticism lies in the formulation of counter-intuitive claims (see, Strathern, 2002, p.309). It also means that I will

contest the pervasive belief that transparency mechanically leads to more accountability.

The study is engaged in Critical Algorithm Studies to provide an ethnographic understanding of the current public policy efforts towards algorithmic transparency. Here, my arguments will not be oriented to feed the criticism of social movements or the reformism of public policy actors, but more modestly, I will accompany actors in the field towards the conduct of reflexive practices. It does not mean that my findings could not orient or inform criticism, but my inquiry is not subordinated to the objectives of emancipation accompanying the egalitarian promises of transparency. Finally, contrary to much research in this field I will not consider algorithms as opaque and dehumanising technological entities but as hybrid socio-technical systems part of the regular bureaucratic culture of organisations (Seaver, 2017). My critical concern will be on everyday and long-standing forms of algorithmisation. I am mindful here of a precious warning from STS scholar Lucy Suchman: “Raising alarm over the advent of machine superintelligence serves the self-serving purpose of reasserting AI’s promise, while redirecting the debate away from closer examination of more immediate and mundane problems in automation and algorithmic decision systems” (Suchman, 2018). I discuss my choice of ethnography as a main research method in the next section.

### **An ethnography of algorithmic transparency**

As noted most studies of transparency try to analyse the outcomes of transparency enactment (Albu, 2014; Albu and Flyverbom, 2016). They are made only after the fact, from the audience point of view. Consequently they cannot describe transparency *in the making*. An ethnographer is able to enter the places where transparency is framed and planned: the sites where everyday

organisational efforts towards transparency are developed. In pursuing an ethnography, the access to sites and the types of discussions occurring in the planning of transparency can inform us of how transparency is conducted and used as a transformative tool. The intuition guiding my thesis is that like many other realities of organisations, cultivating transparency is a strategy, a form of visibility management (Goffman, 1959; Flyverbom, 2019). Consequently, I would like to situate my study among other STS ethnographies of impression-management in organisational contexts (Law, 1994; Hilgartner, 2000; Neyland, 2007a; Barry, 2013). Following the American sociologist Erving Goffman, the hypothesis guiding me is that by studying the processes of information “backstaging” and “frontstaging” made in the name of transparency, we could make sense of transparency strategies and understand the framing of disclosures. The next section explains why I started with an ethnography at the French Open Data task force Etalab.

### **An ethnography initiated at Etalab**

The transformation of State-citizen relationships is often orchestrated by infomediaries, and the French Open Data task force was then seen as a promising place to start an inquiry about the mediation of contestations regarding administrative algorithms. Etalab is a service working both as a support and guiding service for the coordination of open data policies at the State level. The project kick-started in 2011 with the creation of a portal, the drafting of an open licence, the mobilisation of advocates favourable to open data and the inventory of public data. The service was initially directly attached to the Prime Minister through the General Secretary of the Government (SGG). According to STS ethnographer Samuel Goëta, a bundle of reasons and motivations justified its creation by executive powers: a way to appear innovative and competitive in mimicking the USA open data platform (data.gov,

created in 2009); an importation of data sharing models coming from private digital platforms (e.g. Apple App Store) into an agenda committed to State platformisation; an attempt to counter French cities that already disposed of open data portals; and finally, a way for president Nicolas Sarkozy to add the creation of this administrative entity in the list of his achievement before the end of the 2012 presidential election (Goëta, 2016, p.64). Between 2011 and 2016, Etalab has experimented the modernisation of the central administrations by selecting, standardising and sharing their data sets online. In doing so, it participated in an international movement around the Partnership for an Open Government (OGP).

Moreover, Etalab is a hub at the crossroads of executive power, policy intervention, regulators, the Open Government community and citizens: it is therefore an operator capable of pushing for change towards more accountability, but also an agent at the service of administrations and under the influence of executive power. Describing this ambiguous situation of the task force could inform us about: how transparency is practiced; and how the scope of what is to be disclosed is negotiated. Since 2011, this ambiguity makes the task force an unstable entity always evolving with the evolutions of new governments, coming with different imperatives and visions of State digitalisation. Etalab stopped after Sarkozy's defeat at the national election and then was moved in 2013 from the SGG to the General Secretary for the Modernisation of State Action (SGMAP). In 2014 the service was consolidated with the creation of a position embodied by the entrepreneur Henri Verdier: the newly created *Administrateur General des Données* (AGD, or in english, CDO for "Chief Data Officer") was in charge of operating a data governance throughout the whole State. The five data scientists attached to the AGD have also exploited and cross-referenced public data to create prediction and algorithmic decision-making systems to support services (AGD, 2015). It is through the activities of the AGD that Etalab started its ambition to transform the State through more algorithmisation.

In addition to this, Etalab is the instrument through which the digital transformation of the French State is advertised and developed using innovative practices such as: the resources of data science and algorithmic simulators (Shulz, 2019), the incentives of opening State data and creating digital commons (Labelle and Le Corf, 2012; Goëta, 2016; Courmont, 2016); the promises of State platformisation and Start-ups (Alauzen, 2019) and a provocative hacking spirit. Therefore, it has been naturally situated as the paradoxical space helping in managing transparency as well as accelerating bureaucratic algorithmisation. Investigating this paradox could provide a localised account enlightening the international algorithmic drama and its politics of transparency. Having introduced the context and emergence of my thesis topic, the performative method and ethnographic style of my research, I will now conclude this introduction by sketching the chapter plan of my thesis.

## **Thesis Outline**

### **Chapter 2: The Theatre of Transparency.**

Chapter 2 introduces the two core concepts of the thesis: the democratic virtue of “transparency” and its mode of operation understood as a “theatre”. The chapter delineates three ways to envision transparency: as a political *ideal*; a socio-technical *practice* enacted by organisations through devices; and finally as a theatrical *performance*. The analytical device of the “theatre” will be used to specify the staging mechanisms put in practice by actors in the field.

### **Chapter 3: Researching Algorithmic Transparency.**

Chapter 3 presents two approaches for the study of transparency: an evaluative stance and a performative style of inquiry. The evaluative approach is

focused on how the political ideal of transparency is instantiated and asks if its socio-technical *practices* adequately realise this so-called democratic *virtue*. The performative approach studies how transparency performances go beyond their initial aims: transparency *practices* and *performances* help in transforming organisations. The presentation of the ethnographic context in terms of access to certain sites and the roles adopted will push me to undertake a mix of the two approaches where the performative lens takes prominence. The methodological implications of adopting a performative approach to the study of transparency is developed through a theatrical language used to describe its enactment and a sensibility attuned to the explanatory power of algorithms. This style of inquiry is then mandatory, if we are to understand what drives a nursery manager and an open data officer in using the “algorithm” as a *figuring device*. As the opening anecdote can testify, in the work of civil servants, algorithms increasingly became heuristic discourses (see, Ziewitz, 2017).

#### **Chapter 4. Activating the Theatre: Transparency as a Performative Transformation.**

Through the description of contestations targeting French administrative algorithms from 2014 to 2018, Chapter 4 reconstitutes the emergence of the transparency *theatre*: its performers (such as Etalab), dramaturgy (affective discourses justifying disclosures), device (the Right to Explanation) and main witness (a journalist). The chapter gives a first response to the core question of the thesis: transparency is practiced through three distinct performative modes. Specifically, the *self-presentation* mode is about the staging of citizens’ identities performed in order to appear as legitimate *witnesses* in need of transparency. The *controversy* mode is about the affective dramatisation of algorithms’ active role in unfair administrative decision-making. Finally, the *provocation* mode is about how the Right to Explanation generates the coming into being of “algorithms” as objects of transparency. It is in this chapter that we will start to envision the transformative power of transparency performances. For example, the intense regime of publicity

imposed by the three performative modes will help Etalab to become a new policy actor in charge of improving algorithmic transparency. Finally, in Chapter 4 we will see that in enforcing the Right to Explanation of algorithmic decision-making, the French administrative regulator reframed many bureaucratic procedures as algorithms. Here, the concept of “algorithm” will be clearly situated as a *figuring device* used to unpack the intrinsic procedurality of administrative actions.

#### **Chapter 5. Setting the Theatre: Negotiating and Scripting Transparency.**

While the three performative modes gave a general understanding of transparency performances, they do not explain how disclosures are set up, planned and anticipated. Here is why Chapter 5 gives another response to the key question of the thesis in showing that the limitations of transparency are performed through negotiation and scripting. These two new modes of ordering transparency performances orient the quality, depth and temporality of disclosures. Chapter 5 is a case study on a particular algorithm: the French housing tax. Indeed, the chapter tells the story of a meeting where Etalab and the General Directorate of Public Finance (DGFIP) scripted the performances of transparency in framing the disclosures in such a way that key controversial information would be backstaged. Importantly, it is in this chapter that actors will understand that full accountability of the housing tax is impossible. Facing this impasse, Etalab and DGFIP strategically envisioned how transparency could still be practiced and made useful. The two organisations first evaluated the situation, risk and danger of full accountability and, despite the controversial climate, constructed the practice of transparency as manageable. This process consisted in scripting the how and when of transparency performances: an anticipation where the future transparency witness was configured.

Finally, it is in this chapter that we understand how the various figurations of administrative procedures as “algorithms” might orient the way

they are made transparent. When the “housing tax algorithm” is understood as a simple calculus, its explicitness seems simple. But when the same label points to a whole assemblage of systems, citizens and fiscal institutions, here the accountability of the tax becomes too complex.

## **Chapter 6: Performing in the Theatre: Transparency as Exemplarity**

Chapter 6 offers a final response to the core question of the thesis: transparency is performed thanks to *exemplary* performances. The chapter analyses three disclosure events each using a different device and each branding differently the *exemplarity* of transparency performances. Indeed, the process leading to the disclosure of the housing tax source code will be delegated to Etalab, letting DGFIP publicise this achievement with a press release. This document will position DGFIP as a “forerunner” organisation. Soon after, the housing tax simulator created by Etalab is more clearly the device pacifying the will from a journalist to request accountability. Here, exemplarity comes from the innovativeness of the simulator as a device of transparency. Finally, the interview featuring the two organisations during a web TV show appears as an old fashioned performance of *exemplarity*: a moment of branding where the pacification of contestability was at its peak. Ultimately, the *exemplary* disclosures resulted in the pacification of contestability.

In this chapter we will see that since full accountability of the housing tax is impossible, the use of devices will open up a space to pursue political actions going beyond the quest for a better understanding of the fiscal policy. Indeed, events of disclosures will become a competition for the creation of innovative transparency devices (such as simulators) and a call to open new bureaucratic data.



## **Chapter 7. Conclusion: Towards a theatrical understanding of transparency.**

The conclusion will summarise the key argument of the thesis: transparency is practiced through: actors' *self-presentation*; the *controversial* pressure of news media; the *provocative* effect of devices; the *negotiation* and *scripting* of transparency performances; and finally *exemplary* events pacifying future contestations. The thesis will finish by opening further paths of research for prospective studies of public performances, transparency politics and ethnographic accounts of algorithms.

## Chapter 2: The Theatre of Transparency.

### Introduction

Transparency is a vague concept and the flexibility that follows from this is precisely what guarantees its pervasive circulation in society. What nurtures the attractiveness of such notion is the strength of its non-verbal formalisation — an image that exceeds meaning — as well as its broadness, normative connotations and association with consensus: no one will object to more transparency (Alloa, 2018, p.29). We can denote at least eight different meanings of transparency at play in its history and contemporary manifestations: transparency as accessibility, asymmetry reduction, procedural fairness, accountability, public good, rationalisation, truth-making and moralisation (Alloa, 2018, pp.31–32). This thesis will not give a definitive answer about its essence, instead we should be comfortable with mess (Law, 2004). The chameleonic character of the concept is what calls for and sustains the need for an investigation. Moreover, it would be foolish and pretentious to propose another concept that could “replace” transparency, instead I wish to stick with this celebrated ideal and continue to speak “the sublime language of my century” (Debord, 2004 , and more recently; Wark, 2019).

If transparency defies any definitions, if it cannot be stabilised, one tactic to catch the movements of its meanings is to study the past sites of its manifestations: the history of naming and framing transparency. This is precisely what philosopher of science Ian Hacking suggests doing when facing “magical” concepts such as objectivity, transparency or ethics (Hacking, 2015). Of course, such an “archaeology” of transparency far exceeds the scope of this thesis. Besides, other researchers are currently in the process of producing this

significant type of contribution<sup>4</sup>. Nevertheless, in this literature review I wish to sketch a certain trajectory of how transparency has been conceptualised in relevant literatures, a path that helps me to specify its manifestation within my fieldwork. If transparency is a “floating signifier”, in this literature review I will bring together different understandings of it. We are going to see that transparency has been understood as a *political ideal* infused with democratic wishes (part I). Then, we will observe the ongoing development of this ideal through *socio-technical practices* (part II). Finally, we will see how its general modes of operation can be analysed as a *performance* where an actor tries to convince an audience of its quality as a transparent and trustworthy performer (part III).

In presenting this trajectory, I am mapping the concept through various sites of manifestations: the realm of politics and the pressure for publicity exerted on it by the Fourth Estate (part I), the world of organisations and their uses of ordering devices (part II) and, finally, early scientific demonstrations and their influence on the way contemporary authority and morality are sought and achieved in contemporary liberal democracies (part III). Put differently, I present a movement from transparency conceived as an abstract political utopia to its implementation as an organisational and governmental principle, and from its technologically mediated nature to its theatrical appearance as a public experiment. This trajectory is a way to map its connotations and importations in many disciplines: political philosophy, the history of journalism and accounting, the anthropology of trust, organisational theory, media studies and finally science and technology studies (STS), where I situate my contribution. Each of the mentioned literatures adds precious elements for understanding transparency in relation to the field sites. Each discipline sheds a light on a facet of the transparency “ideal”, its contexts and constraints of achievement.

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4- I am thinking about historian Daniel Jütte (NYU) who is in the process of writing a history of transparency from antiquity to modern times. See: <https://danieljuette.com/research-2/>

However, before embarking on this literature review, I would like to foreground an overarching argument I would like to develop in this chapter: once a formal effect grounded in optics, transparency later became a metaphor for political witnessing. Science and technology provided a powerful means to practice transparency using devices as well as furnishing a model for its theatrical *modus operandi*. My hypothesis is that if we want to understand what transparency is and does we should stop seeing it as an abstract ideal but describe its theatrical orchestration involving a specific set of practices and discourses, staging mechanisms embodied by actors and their use of technological devices of disclosure. Let me briefly unpack this intuition.

### **From transparency ideals to accountability performances**

In the wider imaginary of transparency, we can delineate two uses of the idea of transparency: the formal transparency of materials or products (transparency as a state: the material properties of a glass building) and transparency as a process of understanding (transparency in use: seeing as a means of knowing). In the latter case, what is happening is that the optical imaginary of transparency as a state is applied to politics, society or culture: for example, in liberal democracies, the realm of public actions must be seen, and it is expected that through the witnessing of these actions we as citizens will be able to evaluate them. Innovative reforming projects such as the implementation of political values are often first images in the mind of their promoters (Ferguson, 1977). Relatedly, part I will show that as a political ideal transparency is still an abstraction that has many variations: it has been and is still often conflated with ideas of publicity, visibility, openness and accountability. Reinforcing trust is thus its main political aim. These variations are not problematic (transparency will never be unified) but locally defined depending on national regulations, the settings of devices and cultures of accountability. Each of these notions will be used as starting points to question

the political effects of transparency, each of them will be at play in my fieldwork. Unpacking these notions does not follow a chronological order of their sequential appearance along history. Instead, my attempt is to map each of their analytical benefits for my study despite the confusion they generate.

Part II shows the emergence of a gap between these normative variations and their implementations. Organisations use highly different modes and strategies of transparency in order to achieve various goals. In addition to this, technological devices are opening many possibilities of disclosures and witnessing regimes. Finally, transparency is also an object of governance operating in zones constrained by (inter)national regulations and institutions. Part II will explain that once it enters the strategic realms of organisations, transparency ceases to be only an ideal and is transformed into a device. It also means that socio-technical possibilities to achieve transparency will constrain its political effects and depth.

Finally, part III will introduce analytical devices to describe and make sense of the different dimensions of transparency as practiced by political actors. My intuition is that the style of transparency practices developed by organisations is better understood as a collection of theatrical performances. Scientific demonstrations provides a model for thinking about transparency theatrics. In this prototypical model, a performer is displaying proof/disclosures using visual devices in an attempt to access a state of authority that will suddenly make them appear as a “transparent” and “moral” actor. This prototypical model of the performance of transparency that emerged from scientific circles aiming at demonstrating the validity of newly-discovered knowledge bears close resemblance to public theatres where organisations seek to demonstrate the veracity of claims by performing them to a public. Indeed, this final detour via the history of scientific demonstrations will explain that liberal democratic practices of transparency follow similar empiricism (proof/disclosures provide facts imposing a truth) and instrumentalism (facts

must be visually displayed and attested through the use of technological devices).

## I) Transparency as political ideal

### Transparency as publicity

Transparency has often been conflated with “publicity” understood as attracting the attention of the public to something or somebody. In fact, many political issues that used to be discussed under the rubric of “publicity” now tend to be defined as problems “transparency.” The theorist of modern states Sandrine Baume traced the subtle trajectory of these two concepts in Western political philosophy: “Bentham rarely uses the term ‘transparency’ in its metaphorical meaning in comparison to the word ‘publicity’. For Immanuel Kant and Benjamin Constant — two other main thinkers on publicity — the notion of transparency is wholly absent. Kant uses the notion of *Publicität*, whereas Constant speaks about *publicité*. For Rousseau, the notion of publicity is, to the best of our knowledge, absent, while the concept of transparency is less frequent than generally thought” (Baume, 2018, pp.206–207).

For Baume, turning to English philosopher and jurist Jeremy Bentham is perhaps the most obvious choice, if one is to understand the justification of publicity as a political mechanism. When Bentham developed his ideas between the late eighteenth and the early nineteenth century, he saw publicity as a highly efficient way to fight the consequences of bad governance (Bentham, 1990), a guarantee of politicians’ integrity (Bentham, 1999) where information provision could foster debate, and provide proof for sanctioning misbehaviour inside the tribunal of public opinion (Bentham, 1990; Cutler, 1999; Baume and Papadopoulos, 2018). According to Baume, the rise of transparency follows the reformists’ alignment with the thoughts of French philosopher Jean-Jacques Rousseau (Baume, 2018, pp.218-219). If this latter Genevan thinker is known for

his advocacy towards a transparency that is effortless and non-intentional (Rousseau, 1990, p.155; Baume, 2018, p.217), Bentham's conception of publicity was instrumentally oriented towards achieving morality (Naurin, 2006, p.91). While the Rousseauist transparency must be practiced by political actors as an ethics of virtue (a self-imposed dogma, a necessary exhibition), for Bentham's consequentialist vision, transparency is an external pressure towards publicity pragmatically improving the conduct of a moral politics (Ogien and Tappolet, 2009).

More than a century later, the belief that publicity will enhance morality as thought by Bentham is epitomised by the mantra of an author who could be considered the first modern evangelist of publicity, namely the American "people's lawyer" Louis D. Brandeis: "Publicity is justly commended as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants" (Brandeis, 1913).

This reformer of justice who would become economic counsellor for Presidents Wilson and Roosevelt promoted transparency as a way to enhance bureaucratic rationality, secure confidence in companies, and distribute power more equitably. His motivation was that exposing powerful institutions to ongoing scrutiny would not only "disinfect" them but also bring about a more efficient, accountable, and democratic state. Since then, the virtue of publicity linked together a form of moralism and empiricism: facts bring a truth and transparency-as-publicity will produce these facts (Pozen, 2018, p.110). This empiricism is what guarantees the convergence of politics with morality (Habermas, 1991, p.104; Baume, 2018, p.213). This vision is still at the heart of the theory of change animating contemporary practices of transparency studied in this thesis. As we will see in further sections, the belief is that more transparency-as-publicity will reinforce public accountability and secure public trust (i.e. Taylor and Kelsey, 2016).

Although Brandeis' efforts were focused on corporations, rather than on the publicity of public bodies, his mantra became an influential symbol of the American progressive era, and it is also associated with the internationalisation of transparency initiatives. Indeed, as shown by legal theorist David Pozen, Brandeis' views filtered through in emerging conceptions of transparency which framed it as a tool for investor protection, market efficiency, and his proposition of mandatory disclosure was institutionalised in a much broader form during the 1930's (Pozen, 2018, pp.108-110). Decades later, his influence is still present: the NGO WikiLeaks created its first legal entity under the name Sunshine Press in 2010, and four years earlier the Sunlight Foundation was created as a way to foster the internal transparency of the United States Congress. Both NGOs have been known for their advocacy towards the institutionalisation of Open Data, technical standards of anti-corruption and free press. Together with the French Open Data task force Etalab, they are part of the same communities of Open Government bodies.

Before Open Government communities could emerge in the early 2010's, the institutionalisation of transparency as a form of publicity needed a publication and a public. Freedom of information request (FOI) is the device that came to epitomise the progressive vision of an enhanced morality through more publicity. Indeed, during the 1950s and '60s, calls for freedom of access to administrative information were not phrased as demands for more "transparency," but rather a claim made in the name of "publicity". For example, in 1951, Finland adopted the Publicity of Official Documents Act, whereas in the United States of America the Freedom of Information Act (FOIA) adopted in 1966 did not mention the words "transparency" or "transparent" (Baume, 2018, p.204). In the USA context, the quest for more "transparency" is more precisely defined as the quest for an efficient "right to know" (Schudson, 2015).

After Finland and the USA, France was the third country in the world to institutionalise a right to obtain an administrative document — the Bill CADA



from 1978<sup>5</sup>. In France, what was emphasised is the possibility to give citizens “access” to information more than rendering administrations “transparent”. As explained by Marc Dandelot, the current president of the Commission of Access to Administrative Documents (CADA), the right to access administrative documents was first conceived as an egalitarian device of freedom to information (Dandelot, 2018, p.128). The rise of regulatory institutions such as the CADA in France is important for my study and more generally for the institutionalisation of transparency because these public bodies are in charge of making publicity a reality throughout the deployment of bureaucratic and legal mechanisms. It is through the workings and devices of these regulatory institutions that transparency initiatives generate stable and tangible publications such as FOIA responses. It is thanks to legislative and regulatory efforts that transparency-as-publicity shaped a culture of disclosure, demands and moral expectations. As we will see in Chapter 4, the French Right to Explanation of algorithmic decision-making will emerge in the French administrative Law as a right to “access” administrative documents.

As we have just seen, there is a tendency in current scholarly and public policy debates to rebrand FOIA initiatives as improvement towards more “transparency” (Heemsbergen, 2013; Schudson, 2015). But when these initiatives were first created, the discourse of “transparency” was not always used *per se* and it was not as pervasive as it is today. As Sandrine Baume argues, “transparency” and “publicity” have often been competing values, but for her it is the “multifunctionality” of transparency that constitutes its notable appeal, something which as publicity a term is largely lacking (Baume, 2018, p.221). Indeed, transparency has the capacity to “absorb numerous virtues or aspirations, such as sincerity, clarity, consistency, truthiness, pureness, and efficiency” (Baume, 2018, p.221). Or said differently, the concept of

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5 - The Bill creating the Commission of Access to Administrative Documents (CADA), more precisely: “Law n° 78-753 of 17 July 1978 on various measures to improve relations between the administration and the public and various administrative, social and fiscal provisions”. See: <https://www.legifrance.gouv.fr/loda/id/JORFTEXT00000339241/2020-09-25/>

“transparency” is a cohesive and englobing concept that could be used by a variety of currents in political thought (Ball, 2009). The malleability of “transparency” guarantees its wide circulation. What is important for my study is that both concepts have been positioned as empiricist values fostering the disclosure of facts as a way to enhance the efficiency and morality of public bodies. Moreover, if publicity requires a publication and a public, this suggests that it also needs a device of publicity and a type of performance to be effective. I will develop this last point in parts II and III. Finally, if transparency-as-publicity is an act of communication it requires also a process of reporting. I develop this idea in the next section in showing the link between cultures of transparency and journalistic practices.

### **Transparency through reporting**

In the history of transparency, the publication of the English Parliamentary debates (the “Hansard”, after the name of Thomas C. Hansard, the first publisher of these materials who succeeded in monopolising this nascent market) at the end of the eighteenth century is probably one of the most important examples. As a predecessor of FOIA, the Hansard is a very important publication that empowered journalists to monitor and witness political activities. It is important to unpack this story since one of the main witnesses of transparency performances studied in this thesis is journalist. The current institutional and mediatic configuration of public attention towards algorithmic transparency inherits from the history of reporting cultures.

In a seminal article retracing the history of transparency in journalism, media scholar Luke Heemsbergen situates the Hansard as the symbol of a liberal conception of transparency: “The utility of publishing the debates limited arbitrary power of the members of the House via new discursive accountability.

At the time, examples of the effects of publishing the debates were explained through decreasing asymmetries of information for the betterment of constituents' own individual situation" (Heemsbergen, 2013, p.54).

In the context in which the Hansard emerged — at the end of the 18<sup>th</sup> century — interests in publishing parliamentary debates was justified in reference to the fears of "legislator bias" and poor representation (Stasavage, 2004). The spirit of the "Enlightenment", the printing press and the need for a new market for journalism, these different factors challenged parliamentary secrecy and generated a radically new socio-technological configuration in support of the publicity of parliament debates (Heemsbergen, 2013, p.53).

For Luke Heemsbergen, the Hansard was liberal in the sense that it was instrumental to the efficiency of the parliament itself. As we will see in part III, transparency performances are often linked to a certain kind of efficiency gained with appearance. Through the publication of the debates in the Hansard, the belief was that MPs would be able to act with more authority, and the overall political system would appear more credible. With the classical example of the Hansard we see that transparency through reporting is shaped by how media formats gives an opportunity to publicise organisational behaviours. As I will argue in part II, if the materials of transparency are documents created by parliamentary bureaucrats, our focus of analysis needs to shift from understanding transparency as a *political ideal* to investigating its framing as a *socio-technical practice*. Transparency is ordered by an instrumentalism: reporting materials need to be portrayed as useful. Our contemporary transparency regime still inherits from this configuration. Moreover, it appears that Hansard's publicity shapes in return journalistic practices. Put differently, transparency initiatives shape publics or more precisely "the kind of persons and institutions that are in a position to monitor, use, and assess the credibility of any information that is published" (Barry, 2010, p.21).

At least since the Hansard moment, journalists are privileged practitioners of transparency through their reporting missions. It is quite trivial now to say that journalism is an important site of public politics and that it is “the media” who monitor democracy, interpret political actions and inform public opinion. Throughout the 1960’s and ‘70’s, news coverage became more professional, analytical, transgressive and investigative (Schudson, 2015, p.143). In the mind of politicians, the presence of assertive journalists grew — especially since some of them became politicians’ staffers. Media stories also became less descriptive and more interpretative, contextual and explanatory: closer to a “discursive accountability” (Heemsbergen, 2013, p.54). Indeed, Luke Heemsbergen delineates three components of what he calls a “radical transparency”: watchdogs need to be positioned outside of political organisations; from this adversarial position they find or create involuntary mechanisms of disclosure; after publication their reportings should influence the assumptions of the political order. In the digital era, WikiLeaks epitomised this radicality by putting in circulation the belief that transparency could fix democracy: radicals have a tendency to see disclosure as an end in itself (Fenster, 2017).

Heemsbergen points to the difficulty of evaluating the political impact of such radicality. The apparent pacification of citizen-State relationships through a “revealing transparency” performed by journalists operates in a similar mode to what anthropologist Manuel Delgado calls the “ideology of public space” (Delgado, 2016). For him, the promotion of public space as the imaginary territory where democratic citizenship is finally expressed positioned this space as the space of pacification where the violence of the street is forgotten. Analogously, transparency-as-reporting creates the tempting ideal of an easy democratic access to knowledge conceived as information delivery (Tsoukas, 1997, p.829). It is as if morality will derive simply from reporting — but what is forgotten in this vision is that despite a public display of the State’s misbehaviour citizens could still be harmed and suffer from unfair State actions.

If the media can help in organising publics and establish evidence (Dewey, 1927), it cannot replace the judicial system.

Transparency practices operating in the realm of information and ordered by a form of pacification imply that it is possible to avoid direct clashes: but for this to happen information first has to be visually witnessed through journalistic reporting (Ezrahi, 1990). As already anticipated by sociologist Gabriel Tarde, information disclosure works as a form of distancing: a topology creating layers of meaning requesting an exegesis. In *Conviction and the Crowd* (*L'Opinion et la Foule*, 1901), Tarde was advocating for the witnessing of contestation through the consultation of statistics and press releases. In that way, citizens would not be obliged to take to the streets in protest: events would be made comfortably visible and transparent through media formats. With this argument in mind, geographer Andrew Barry thought about transparency as a “technical solution to the management of affect” (Barry, 2010). The question, then, remains whether the journalistic reporting bringing more transparency is pacifying or nurturing contestability.

In this section, we have seen a number of elements that are important for understanding the enactment of transparency in my fieldwork. We learned that transparency by reporting is an ideal rooted in journalistic practices. These reporting practices address and give rise to certain types of public and political witnesses. Finally, evaluating the political effects of reporting in enhancing accountability is complex since it could either distance citizens from frontal revolts or nurture their wish of contestations. Ultimately, what transparency by publicity and reporting is generating is visible evidence. In the next section, I analyse how being sensible to visibility is crucial to understanding the current politics of transparency.

## Transparency as visibility

If the meaning of transparency is conflated with publicity, its effect of curing political misbehaviours is active in making these activities “visible”. Hence, transparency-as-visibility has to be situated in the long Western tradition of techniques belonging to the “attestive visual culture” of democratic subjects (Ezrahi, 1990, pp.73–74). In this culture, politics is first and foremost seen and citizens are asked to certify the honesty of political actors inside a “theatre” composed of visual devices. Journalists are situated as mediators in charge of scrutinising politicians, reporting and delivering evidence. Writing at the end of the 20<sup>th</sup> century, political theorist Yaron Ezrahi summarised this history of politics-as-vision and positioned it as a constitutive element of what he called the “civil epistemology” of democracy. As he puts it: “I would like to emphasize the centrality of the belief that the exercise of political power can be at least partly transparent to the lay citizens in the field of common-sense experience, the belief that at least in some respects seeing (directly or, as we shall see even more importantly, indirectly) is knowing, that politics, very much like the physical world, is a view, that the visually accessible surfaces of the political world are reliable indicators of factual political truths, that what is seen is largely what is happening” (Ezrahi, 1992, p.366).

According to Ezrahi, the surface of politics, its “reality”, is created by the concatenation of what is made visible, the ordering of accessible facts framed by technological devices, and the advocacy of ideals values such as transparency. Cultural theorist Clare Birchall has made a similar argument in positioning State transparency orchestrated through Open Data as a “distribution of the sensible” (Rancière, 2000, reframed by; Birchall, 2017). For her, the capacity to witness visual evidence orders a place to become a political witness. For Ezrahi too, transparency-as-visibility is a way of creating “factual political truths” that are

received, negotiated and possibly contested by “common-sense” analytical capacities and sensibilities (Ezrahi, 1992, p.374).

In this configuration, transparency ceases to be simply an ideal and comes to be defined as a central performance of democratic public life — here is a central argument I will develop in part III. Yaron Ezrahi suggests that such transparency-as-visibility became a mainstream conduct of liberal politics (Ezrahi, 1992). Since then, transparency practices nurture curiosity and attract civil attention, because being a respectful witness is being committed to the ideal of the “well-informed citizen” (Schutz, 1976). In this context, science and technology have a civic vocation to “uncover” political reality.

The sublime attraction of transparency has been re-activated during the beginning of the 20<sup>th</sup> century. This attraction emerged as new optical and technological capacities developed through the empiricism of scientific methods which allow us to make “visible the invisible”, and to cure what is dysfunctional — whether it is a corporation or a physical body. As Brandeis would say, no matter what is sick is diminished by “social or industrial diseases” (Brandeis, 1913). This configuration where science and technology produce new facts through new capacities of seeing and where these facts are used for moral valuation will be central for the legitimisation of transparency by contemporary in liberal democracies (Ezrahi, 1990).

The attractive influence of Brandeis’ advocacy of publicity as a “disinfectant” during the early decades of the 20<sup>th</sup> century was not only present in the minds of some progressive American reformers, but also touched a key domain of modern everyday life: architecture. In her book, *X-Ray Architecture* (2019), the influential design historian Beatriz Colomina clarifies this link between new capacities of seeing and the medical subject: “The discourse about transparency in modern architecture is an echo of the discourse about transparency that was part of Röntgen's first scientific paper announcing the

discovery of X-rays in 1895 and immediately captivating the popular imagination. The ability to see through material challenged all assumptions and social protocols about privacy and psychological well-being and therefore all architectural concepts of shelter and comfort. Everyone became a permanent patient in need of a new kind of medical domesticity” (Colomina, 2019, p.147).

As Colomina shows, the formal and metaphorical meanings of transparency are joined together: the formal transparency effects of architecture bring new types of visibilities to a modern subject aligned with Brandeis’ credo, and this effect nurtures in return a new need: the comfortable, democratic taste of visual witnessing (Ezrahi, 1992). Transparency-as-visibility puts in circulation the belief that politics could be simply witnessed through a documentary gaze. Nevertheless, we also have to remember that every appearance has its oscillating *chiaroscuro*, just like in a Renaissance painting where the contrast between light and shades blurs our understanding of the pictured scene. Indeed, anthropology and sociology have argued the paradoxical claim that transparency is not the enemy of secrets (Simmel, 1906; Taussig, 1999; Strathern, 2000b; Corsín Jiménez, 2011; Birchall, 2014). The focus of transparency discourses on our visual sensory experience obscures how transparency practices are performed through an orchestration of discourses, staged appearance and a particular temporality — a theatrics I will discuss in the last part of this literature review.

As Beatriz Colomina suggested earlier, transparency discourse follows a classical optical vision operating a clear separation between the inside and the outside: there is no place in its imagination for intermediate performances and practical enactments developed by individuals and devices. Transparency as a process that brings understanding is informed by the optical analogy of a subject visually witnessing by virtue of a curing light (Tsoukas, 1997).

Viewed from within the imaginary of transparency, re-framing the concept of transparency as a performance is a non-obvious intervention. It is the



conceptual challenge of this thesis since the optical imaginary of transparency has been institutionalised through centuries of cultures and techniques of optical observation, from the study of street crime patterns by early 18<sup>th</sup> century police science to the panopticism inherited from Jeremy Bentham, from CCTV cameras to facial recognition systems.

One just needs to see: the belief in transparency-as-visibility is that the sight brings and guarantees intelligible explanations. Even as citizens-as-users are constantly struggling with more and more technical systems which are difficult to comprehend — for example algorithms — transparency remains a celebrated ideal. This is a paradox I consider in this thesis.

Ezrahi's work shows that transparency-as-visibility is profoundly connected with our western conception of witnessing politics and technology, but the question remains whether visibility will be sufficient to compensate for technological opacity. As I aim to make clear in the empirical chapters, the belief in understanding-as-seeing is problematic. On many occasions, trust in our optical capacities blurs the vision of what is made transparent because it does not consider the transparency practices developed by people sitting at the table of the strategic calibration of disclosures. As I will discuss in chapter 5, transparency-as-visibility obscures the negotiated nature of transparency practices. The idea that "seeing is transparently knowing" might be more a theory of persuasion than a theory of understanding. In other words, the trustful medical imaginary initiated by Brandeis could be seen as naive and misleading.

In the second part of this literature review, we will see that transparency is not just a visual effect between a performer and an audience. It is planned by organisations (Flyverbom, 2019), physically embodied by experts who need to defend their interests (Hilgartner, 2000), enabled by new technological devices (Harvey et al., 2013), and has a particular temporality that "let[s] people know in time" (Schudson, 2015, pp.180–227). Transparency is more

than a visual metaphor: it entails questions of governance touching on the epistemic cultures of practitioners and their ability to materialise it in devices as well as sequence it through performative events.

In the next section, we will see that applied to organisations or systems, this ideal of transparency-as-visibility fosters their openness to scrutiny. Contrary to publicity and visibility, the rhetorical discourse of openness has recently gained a stronger prominence in public policy and technological discourses: the mantra of opening up State data is even what legitimated the creation of Etalab.

### **Transparency as (a consequence of) openness**

Conceptually, there are two ways to specify the relation between transparency and openness: either they are conflated, or the former is an effect of the latter. Firstly, their conflation is enabled by the fact that both concepts promise visible information, sincerity, morality and the empowerment of citizens through new disclosures. As I will explain in empirical chapters, I found this conflation to be pervasive during my fieldwork. Secondly, the generative power of transparency as a mechanism facilitating openness is revealing a tension between considering this process as an empirical securing of facts or as a call to action for citizens in the use of disclosed evidence. In a seminal article on the modern imaginary of transparency, aesthetic philosopher Emmanuel Alloa explains this problem eloquently: “What is at stake is whether transparency can claim to stand for the openness it purports to bring about. [...] More importantly, however, transparency as openness faces an ontological contradiction: is transparency constative or transformative? Does it register a fact or does it elicit change?” (Alloa, 2018:41).

Following Alloa, we can say that the political evaluation of transparency-as-openness is two-fold: does the performance bring truthful facts, and can we do something useful with them? Can we change a state of affairs thanks to new disclosures? Framed differently, we can ask: does the publicised proof help to evaluate the morality of the performer, or is it disconnected from this purpose and does it serve other ends? Chapters 5 and 6 will explore this question, as the professional actors studied in the field of algorithmic transparency in France justified new disclosures as a pursuit of innovation — an approach not necessarily focused on bringing about a better understanding of algorithmic decision-making.

What is important for my study is that the so-called “open” and “transparent” disclosures are considered attractive insofar as the knowledge they bring can be useful. Openness and transparency foster the fantasy of eternal circulation of information and its externalisation without transformation (Tsoukas, 1997; Corsín Jiménez, 2011, pp.184). This could explain the rise of movements advocating for a “right to know” that cut across consumer, political and environmental activism along the second half of the 20<sup>th</sup> century. Journalism professor Michael Schudson gives three explanations for the rise of these movements in the USA, and more generally in liberal-democracies (Schudson, 2015, p.26). The first reason is the transformation of the institutional framework so that executive powers are continuously held accountable under the watchfulness of news media, think tanks and public opinion. The second is the fact that legislative initiatives constraining institutions to be open and transparent succeed in having strong support from politicians and civil society. Finally, Schudson points to the rise of a critical public mind in the wake of various processes of social change such as the rise of the civil rights movements, a mass public with access to a critical culture in higher education and an irreverent tone in news media and popular culture.

It is clear through the history of FOIA that the positive dogmas of transparency and openness did not start with the World Wide Web, but surely, information technologies expanded the possibilities for information access, analysis and visualisation. More importantly, since the 2010's the pervasive discourse towards enhancing a transparent, open, participatory and collaborative State is deeply sustained in cultures of software and programming (Tkacz, 2015, p.2). This ideal has been publicised by the Silicon Valley guru Tim O'Reilly as the realisation of an "Open Government" where the State is seen as a platform (Lathrop and Ruma, 2010). This State must show its ability to put open data in circulation through web protocols and infrastructures (e.g. Application Programming Interfaces).

In this effort to enrol audiences in "Open Government", transparency is presented as a positive effect of openness. But paradoxically, as shown by media scholar Nathaniel Tkacz in his analysis of Wikipedia, organisational politics driven by openness are compatible with closure, there is even something about the rhetoric of the open "that actively works against making these closures visible" (Tkacz, 2015, p.33). One way to see this is by saying that openness and transparency are merely rhetorics that are so sublime that we forgot to consistently judge their outcomes, as suggested by Ezrahi: "certain properties of political action are more likely to be determined by their rhetorical-ideological import than by their instrumental effect" (Ezrahi, 1990, p.11).

Put differently, openness can order closures because what is made visible under the label of "transparency initiatives" is orienting various forms of what organisational theorist Mikkel Flyverbom calls "visibility management" (Flyverbom, 2016, 2019). Indeed, in the digital context: appearance and access are selective and create concealments; too much visibility can obfuscate what is politically important; too little openness leaves many aspects inaccessible; the labour of making something visible can be hidden by the shiny event of

disclosure; and openness does not guarantee an understanding of what is made visible.

In this section we have seen that transparency and openness were either conflated or in a cause-effect relationship where it is believed that more openness brings mechanically more transparency. A consideration of the scientific and information liberalism that advocates “openness” has shown that new disclosures need to be made useful and put at work for a more efficient State actions. I have also discuss that just like publicity, transparency-as-openness is made possible by devices, and in the digital context this project becomes associated with the State’s technological modernisation. Despite the seductive vision of openness, critical studies of organisational politics have shown that more openness does not guarantee more knowing, but more accounting. After having described the different variations of transparency, I will conclude this section by unpacking the intended consequence of transparency initiatives: the achievement of accountability.

### **Accountability as (a consequence of) transparency**

In contemporary theories of accountability, the notion has been defined as follows: “a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgment, and the actor may face consequences” (Bovens, 2007, p.450 for a discussion see; Baume, 2018, p.214).

Therefore, the concept then identifies a relation where a performer gives explanations and justifies them, and an audience or public is there to witness according to its attestive visual culture, to question the credibility of justifications and eventually to call for penalty or punishment. In short, accountability requires transparency, an evaluation of proof through witnessing,

then a possible form of sentencing. The last step of judgment brings new actors to the scene: regulators, judges and courts. In this configuration, what guarantees the political effects of transparency in enhancing accountability is its capacity to generate credible justifications that can satisfy citizens. Interestingly, if accountability is as the expert in public administration Mark Bovens says a relation between “an actor and a forum” it involves a kind of performance, an idea I develop in part III.

This vision of accountability is elaborated, and reframed, in the work of sociologist Erin Kelly, who notes that there are several interrelated conditions to an effective accountability: transparency as the legal obligation to deliver *individualised* information; the fact that this information should be delivered in an *intelligible* form since a justification is dependent on the interpretative capacities of lay citizens; and the assumption that accountability is a mechanism to create a sentiment of *morality* (Habermas, 1991, p.104; Kelly, 2013, p.3; Baume, 2018, p.211). In Chapter 4, the political justification needed to be made public emerged as part of a regulation institutionalised in the French Code of Relation between the Public and the Administration (CRPA). More precisely, what is to be justified is “the degree and mode of contribution of algorithmic processing to [an administrative] decision-making”<sup>6</sup>. Chapters 5 and 6 investigate whether algorithmic transparency enhances the accountability of public bodies.

In liberal democracies, accountability serves not just as a management of the politically visible: it is also creating an apparent order and stable relation between the State and citizens. In the modern history of facts narrated by historian Mary Poovey, the science and techniques of accounting have been key to the naturalisation of systematic knowledges created by numbers immune from theory and bias: an arithmetic securing merchants’ honesty and disqualifying justification through rhetorics (Poovey, 1998, p.64). Scientific and

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6 - Article R. 311-3-1-2 of the French Code of Relations between the Public and the Administration (CRPA).

technical standards of transparency and accountability are not just expressions of a right and freedom to witness, they have also been institutionalised as ways to avoid “chaos” (Ezrahi, 1990, p.22). Indeed, liberal democratic organisational politics positioned transparency as processes of mutual adjustments and cooperation where the State is seen as an open technological system (Ezrahi, *Ibid*).

As accountability is enacted by techniques inherited from science and technology demonstrations, they provide a vocabulary of equilibrium and a method to generate authoritative objective knowledge. These techniques generate routines, rituals, habits and normative forces that will order the experience of accountability. In short, the “republic of science and technology” is providing witness-able “public knowledge” and guarantees “public good” (Ezrahi, 1990, pp.23–25). The method to achieve this “public good” is a form of decentralised accountability: every citizen can claim for transparency, the exposure of all public actors must be guaranteed, and public knowledge is a constraint upon and a defence of centrally directed public actions.

In this section we have seen that accountability was achieved through *disclosures, explanations* and *public justifications*. As an ideal, the concept is positioned as a mechanism enforcing an *obligation* to produce *personalised* and *intelligible* accounts. To fully understand accountability enactment our attention has to be sensitive to its construction as a socio-technical practice. Indeed, science and technology rhetorics, standards and devices made this ideal a reality and legitimised their efficiency in improving the morality of political actors, through the production and circulation of accounts. Controlling these standards is necessary to practice information retention, discretion and to maintain a form of secrecy.

In this first part of the chapter, I introduced the idea that all the different meanings of transparency and their associated concepts were the

manifestation of an empiricism where facts represent a truth that needs to be attested, and of an instrumentalism where political witnessing is realised through the use of devices.

## **II) Transparency as socio-technical practice**

In this part, I unpack how transparency is enacted as an organisational practice, a strategy involving the use of technological devices, social interaction and governance.

### **Five transparency strategies in organisational contexts**

Surveying the extensive history of methods to achieve transparency, organisational theorist Ethan Bernstein identified four modes or strategies for its contemporary technological enactment (Bernstein, 2016). The most famous one is the release of disclosure: “the act of making new or previously secret information known. In other words, ‘let me tell you about our work’” (Bernstein, 2017, p.218). Disclosure is a particular performance constraining or intentionally leading those who hold information to make it public (Schudson, 2015, pp.260-277). The culture of disclosure has for example been institutionalised through freedom of information requests (*Ibid*, pp.28-63) and consumer’s right to be informed (*Ibid*, pp.64-102). Organisational theorist Mikkel Flyverbom noted that disclosures are not neutral in the way they orient our scrutiny: “all kinds of disclosures guide our attention and must be understood as managed visibilities that could be different” (Flyverbom, 2016, p.1). The disclosure of an algorithm source-code and of its documentation studied in Chapter 6 belong to this culture of disclosure.

The second classical mode of enabling transparency is through surveillance, understood as “close, constant, and comprehensive supervision



[...]. In other words, ‘we’re watching everything you do’ or ‘the few watching the many’”(Bernstein, 2017:218). Surveillance is identified as a coercive method to insidiously control individuals, it can be done by direct witnessing or through complex data tracking (Agre, 1994; Ajunwa et al., 2016; Gekker and Hind, 2019). Surveillance through data tracking is stressing the affective dimension of transparency in our contemporary neoliberal context, especially because it could be seen as an invasion into citizen privacy (Bernstein, 2012). In this context, the belief that we are living in a “society of total transparency” as spread in postmodernism (Baudrillard, 1990; Vattimo, 1992), science-fiction (Brin, 1998) and cultural criticism (Han, 2015). If disclosures are moderate and stay as the manifestation of an information withholding strategy — they follow rules and procedures and are understood as a necessary advancement of the democratic accountability — surveillance is classically seen as totalising and harmful.

The third mode of transparency identified by Bernstein is “monitoring” or “any non-hierarchical observation system that gathers information about an activity or task and makes it more widely available. In other words, ‘let us all see your activity’” (Bernstein, 2017, p.218). Unlike surveillance, the monitoring results are shared with the monitored, it is a deterrent strategy. While disclosing is an occasional event, monitoring is a more continuous and standardised process of information tracking and display. For example, the NGO Transparency International is regularly monitoring the level of corruption by country and by topic (e.g., private sector, humanitarian assistance, sport, etc).

The last transparency mode described by Bernstein is “process visibility” considered as the act of “providing visual information focused on the process or implementation of a workflow or set of activities. In other words, ‘watch our workflow’”(Bernstein, 2017, p.218). While disclosure generally corresponds to raw materials suddenly being put into the light, making a process visible indicates an effort of editorialisation and mediation towards an audience. Sharing a process is possibly opening the documentation of an object of

transparency, while disclosure is generally a *re*-presentation of the object itself. Of course, a process could also be surveilled and monitored. Moreover, an innovative form of making a process visible could be to orchestrate a mediation between designers, owners, regulators and users of an object of transparency (Guillaud and Marcou, 2017).

The four modes can be categorised into two different paradigms orienting transparency initiatives: pedagogical objectives and the desire to reduce an information asymmetry between stakeholders (thanks to disclosure, process visibility, and monitoring) or the attempt to control (Han, 2015, p.vii), prevent (Harvey, et. al, 2013) or condemn undesirable behaviours (often using surveillance or monitoring). Of course, these two paradigms and modes can be mixed. The next section will detail the role of devices in strategically orchestrating transparency in these paradigms. If the four modes are general visions, the quality, opportunities and constraints of devices are the core elements that will orient citizens' attention capacities and care for scrutiny.

### **Critical studies on transparency devices**

Realising democratic ideals through the performance of “open” technologies and “transparent” disclosure is a pervasive movement in digital culture. It started at the birth of early web communities and multimedia displays in American counter-culture (Turner, 2006), the advocacy for transparency developed by “hackers” (Coleman, 2013) and “makers” movements (Berrebi-Hoffmann et al., 2018), open source developers groups (Kelty, 2008), Wikipedia editing communities (Tkacz, 2015), and the emergence of open government and open data policies in countries such as the USA (Pozen, 2018), the UK (Gray, 2014) and France (Labelle and Le Corf, 2012). In organisational contexts, contemporary privileged sites of transparency technological enactments involved the use of indicators (Merry et al., 2015; Rottenburg et al.,

2015), rankings (Esposito and Stark, 2019), audits (Power, 1999; Strathern, 2000a), reports and due diligences (Flyverbom, 2016), FOIA requests (Schudson, 2015) and graphical user interfaces (Cellard and Masure, 2018).

In this section, I would like to review some of these previous studies oriented towards the politics of transparency devices. More precisely, my aim is to situate the role of devices in orienting the witnessing process and ordering the border of what should or should not be made public. In doing so, I will present four arguments developed by the critical studies on transparency devices: transparency is *selecting* and dividing what could be made visible; devices alternatively *delegate* the labour of exegesis to the citizen and open up a space for participation; in some situations, they help to *anticipate* future moral failures as well as *transform* organisations.

The first powerful finding from critical studies on transparency devices is that instruments of accountability can reduce the depth of what could be made public. For example, management researcher Mikkel Flyverbom, described the role of transparency reports as a way to highlight certain public issues and keep others into the shadow, what he calls “visibility management”: “The result of these disclosures in the name of transparency is that the public gaze is directed to particular parts of the problem – for instance that some governments make a lot of requests for information to be taken down or made available for their use” (Flyverbom, 2016, p.8).

By analysing the transparency reports of technological companies such as Facebook or Google, Flyverbom suggests that the key controversial issues are never mentioned in the reports: “Such reports thereby respond to an increased focus on transparency when it comes to data aggregation, covert uses of data, as well as filtering, surveillance and censorship in digital infrastructures. But they also distract our attention from the roles and responsibilities of internet companies. Transparency reports may list the number of requests made by

individual governments, but they do not provide insight into the agreements or relationships between states and internet companies” (Flyverbom, 2016, p.8).

For transparency practitioners there is a tradeoff between the reductionism a device can bring and the flood of too-many disclosures. Moreover, in this process very specific ways to evaluate transparency are legitimized as valid and get an authority as performance and comparison metrics (Ruppert, 2015). It is then easy to conclude that devices might undermine the promising ideal of transparency. More precisely, what I take from Flyverbom is that devices materialising a transparency gesture can orient the visibility of key information — a claim I develop in Chapters 5 and 6 in delineating how transparency is made selective and how its potential is divided.

The second important claim from critical studies on transparency devices is the fact that we can observe an oscillation between actors using devices as a way to delegate the work of information exegesis to the user — in extreme cases we are in front of a curated presentation as a way to manage secrecy — or by using devices to reopen possibilities or understanding through data manipulation. For example: top universities rankings are mainly given as unchangeable indicators, we cannot reuse the ranking metrics. To give to the user the possibility to reorder and recompute the data could open ways to different interpretations and recompositions of the ranking (Espeland et al., 2016). Transparency devices studied in Chapter 6 are surely opening a space for citizen participation, but an investigation is needed to delineate whether this participation will permit contestability, foster accountability and if it is not also a way to naturalise the invasion of algorithms inside administrative procedures.

If then, transparency initiatives nurture technological regularisation it means that they have effects beyond the delivery of information. The process through which disclosures are transforming organisations is the third important argument from critical studies on transparency devices. For example, in a

critique of university audits, anthropologist Marilyn Strathern identified the performative effects of audits in reshaping organisations in ways that could fit the metrics present in the reports (Strathern, 2000, p.313). The same critique has been made by Hansen and Flyverbom in their study of corruption indexes: “Rankings are not simply techniques of representing things, but themselves capable of ordering organisational and social action once they become latched onto institutional agendas” (Hansen and Flyverbom, 2014, p.882). What I take from these studies is that the performativity of transparency helps to transform organisations and actors — a point I will develop in Chapter 4 where the emergence of algorithmic transparency will help to reconfigure Etalab’s missions.

I would like to finish this section of the literature review by discussing Harvey et al. (2013) since this study is a fruitful example unpacking the effect of transparency devices. The authors evaluated three transparency devices: the performance metrics that are part of the UK Government’s “Transparency Agenda”; “conflict mapping” as part of Kyrgyzstan’s internationally sponsored programmes of Preventive Development; and the procedures of Peru’s National System of Public Investment (SNIP) through which public investments are regulated. The authors start by describing the types of disclosed data, then analyse the institutional procedures of how the devices worked, and finally criticise actors’ effort to frame the device as a space producing self-evident knowledge. The key powerful claim of Harvey et. al (2013) lies in the fact that transparency devices help to react to past wrongdoing and to try to anticipate future moral breakdowns.

If I follow Harvey et al. (2013), in this context, digital devices seem to be used as rhetorical devices where transparency is claimed and demonstrated by putting information on display. In this way, any public future complications are preempted: transparency is pacifying contestability. This broad appreciation of transparency devices is interesting for my study since in Chapter 4 devices used

in accountability performances seem to act as a political defensive response employed by institutions that have been previously attacked. Indeed, the institutionalisation of transparency often comes after scandals, active pressure and contestation from civil society or news media (Schudson, 2015, pp.135-179).

To summarise, the studies mentioned in this part are valuable because they point to the key role of technologies and technical actions (i.e. devices, procedures, standardisation) into the instantiation of transparency and the orientation of witnessing. They make clear that transparency ideals are nothing without specific devices that could: select, curate and divide information; open up citizen participation and delegate the task of interpreting disclosures; order a dynamic transforming organisational goals and finally anticipate future accountability failures. While in the previous sections I detailed broad strategies of transparency, in this section I zoomed in on the role of devices within organisations. I now turn to another scale of analysis, where I will unpack the national and international technological contexts where transparency is practiced. Here, transparency becomes a global object of governance.

### **Transparency as an object of governance**

Describing transparency as an object of governance is important since accountability regulations and the politics of technology are increasingly cross-cutting issues discussed at different levels of intervention and involving a large number of actors. For actor-network theorist John Law, modes of governance or what he calls “ordering” are best understood as explicit or implicit organisational “strategies” (Law, 1994, p.1). Inspired by Law’s point, Mikkel Flyverbom writes about transparency as a form of “management”, more precisely as a way to manage visibilities (Flyverbom, 2016). Seeing transparency as a form of ordering emphasised two important features of governance: its *fragility* “because attempts to shape conduct are always contested” (Flyverbom, 2015,

p.170) and the *multiplicity* of ways to govern or “the various shapes and orientations of attempts to govern” (Flyverbom, 2015, *Ibid*). According to this view, we can say that the transparency of politically-charged information is accepted by the public only through a fragile negotiation between the device specificities decided by the designer and the open-endedness of the witnessing experience enacted in a zone of uncertainty (Suchman, 2013, pp.55–57; Harvey et al., 2013). Moreover, the *multiplicity* of heterogeneous devices at disposal of organisations to perform transparency transformed this practice into a complex multimedia experience scattered in different places and ordered by various temporalities. For example, to appear “transparent” an organisation can use audits, reports, data disclosure, press conferences and release, social media posts, simulators, etc.

To exemplify the role of transparency as a mode of governance, I would like to use Andrew Barry’s ethnographic work on the BTC pipeline (Barry, 2006). This study is important for situating the role of technological infrastructures, their link to the practice of transparency and the dynamic interplay between local, national and international contexts. In his ethnography of the oil industry, Andrew Barry described how the World Bank and the United Nations promote transparency as a way to certify what a “good governance” between actors should be (Hood and Heald, 2006). The oil companies are then obliged to incorporate transparency guidelines and publicly advertise their honesty in terms of environmental impact: “In constructing the Baku–Tbilisi–Ceyhan (BTC) pipeline, for example, the oil multinational BP claimed that the pipeline would be ‘safe, secure and unseen’. The claim is significant in implicitly drawing a contrast between the sometimes highly visible pollution associated with the old Soviet oil industry and the invisibility of the new industry operating within the zones of qualification associated with the doctrines of transparency and corporate environmental and social responsibility” (Barry, 2006, p.248).

Paradoxically, transparency guidelines develop an invisible zone where transparency can be both claimed and not actually realised. As Barry showed it, the information made public by oil companies is curated to cover controversial issues, a transparency rhetoric is used as a way to conceal: “Within the new zones, the pipeline itself would be buried and any environmental and social consequences would be monitored, minimized and mitigated. At the same time, information about the construction and operation of the pipeline would be made public. In this way, the pipeline would be made visibly invisible” (Barry, 2006, p.248).

In this section we have seen that transparency is often put into practice through governance initiatives involving many stakeholders, each of them with their strategies, modes of ordering information and attempts to manage visibilities. I foregrounded the idea that this governance was fragile and encompassed multiple possible actions. It means that transparency performances have no guarantee of success, but that creativity and variations in ways to govern may increase the general efficiency of a strategy.

In renewing with the STS literature on scientific and political demonstrations, the next part develops the analytic frame of transparency-as-performance. Indeed, we will say that in STS the ideal-type of scientific performances became a heuristic model to make sense of attempts by political actors to appear credible and trustworthy. It does not mean that liberal-democratic uses of transparency regimes are necessarily “scientific”, but their modes of performance inherit from the same belief in empiricist accounts and instrumental actions. In order to analyse transparency-as-performance, I will use the metaphor of the “theatre” to describe its configuration as a method involving discourses, technological devices, social performances and a specific temporality of disclosures. The theatres of public performances described by STS scholarship are not places, but a set of necessary techniques or methods used to order the publicity of evidence and secure authority. Before introducing



my quest to catch what is the "transparency theatre" at the end of the chapter, I review two previous attempts to use the "theatre" metaphor, namely, the "theatre of proof" from science historians Simon Schaffer et Steven Shapin, and the "theatre of authority" from political scientist Yaron Ezrahi.

### III) Transparency as performance

#### The theatre of proof

Before transparency became a pervasive instrument of Western politics, a privileged site for an investigation of its mechanisms were the experimental science demonstrations of Thomas Hobbes and Robert Boyle in late seventeenth century England. In these demonstrations studied in Shapin and Schaffer's book *Leviathan and the Air-Pump* (1986), the scientist performs and demonstrates new discoveries in a convincing way in order to become trustworthy. The authority of the experimentalist is guaranteed through facts stabilised using rhetorical techniques and visual representations, a good dose of social persuasion and the material quality of the object and arrangement of demonstration, in this case, the air-pump (Shapin and Schaffer, 1986, p.25). The empiricism at play in the demonstrations was not of a purely epistemological kind: since the very beginning of scientific performances, as noted by Noortje Marres (2012, p.86) in her commentary of Shapin and Schaffer's book, the "experimental mode of knowledge production already involved the invention of 'the empirical' as a form of publicity". Facts needed to be made public in order to test the transfer of knowledge to new audiences.

These public demonstrations are examples of what sociologist Bruno Latour (1984) reframed as the "theatre of proof". An expression he coined in his studies on Louis Pasteur's public trial of the anthrax vaccine<sup>7</sup>. Both in Shapin

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<sup>7</sup> - Pasteur being the famous French doctor *honoris causa* in medicine who created in 1885 the first remedy against rabies.

and Schaffer's work as well as in Latour's study, the "theatre of proof" is committed to an empiricism: the veracity of facts needs to be credible. But as Marres analysed, this empirical-as-publicity is constructing the problem of transparency as a performance since what is generated in the scientific practice as "real proofs" need to be formatted as public demonstration. Here, transparency is folding proofs into devices of publicity.

This conception of empirical proofs as performative devices created a distance between the audience and the scene of experimentation. This "virtual witnessing" strategy employed by Boyle involved: "...the production in a reader's mind of such an image of an experimental scene as obviates the necessity for either direct witness or replication" (Shapin and Schaffer, 1986, p.60).

Indeed, Robert Boyle's engravings showing the workings of the air-pump served as an after-the-fact validation: if enough materials were disclosed, the coherence and truthfulness of a performers' scientific method will be ensured. As Shapin and Schaffer continues: "the images served to announce, as it were, that 'this was really done' and that 'it was done in the way stipulated'; they allayed distrust and facilitated virtual witnessing" (Shapin and Schaffer, 1986, p.62).

If proofs could stand for the whole show of demonstrations, the audience would not be obliged to witness the veritable scene of experimentations. It is then since the beginning of scientific public demonstrations, in the 16<sup>th</sup> and 17<sup>th</sup> century, that visual evidence came to serve as a mediator between a performer and witnesses. Nonetheless, the ideal virtual witness of the "theatre of proof" was not neutral, and feminist STS have made an important contribution in situating the constructed nature of the audience as a group of gentlemen legitimised by modest accounts of the demonstration mirroring reality (Haraway, 1996). A subject without opinion and embodied

affectivity exerting a medical gaze became the perfect “modest witness” for modern empiricist accounts (Haraway, 1996, p.429).

What is important for my study is that the “theatre of proof” qualifies transparency as a performance of public life inherited from modes of representation developed as part of scientific demonstrations. But performances of transparency are experimental not only because they inherit from “experimental” scientists but because they are risky: they may fail as I argued in the previous section and despite planned strategies they could involve improvisations, face situational contingencies and breakdowns.

With the development of new technologies of demonstrations, STS have extended these accounts of “theatre of proof” as it could now help in virtually witnessing demonstrations of new knowledge through televised events (Collins, 1988) or digital devices (Woolgar and Coopmans, 2008; Smith, 2009; Perriam, 2018). The transfer from scientific demonstration to contemporary digitised transparency performances is perhaps best understood by considering the liberal-democratic uses of transparency as a key method of making political actors “visible” (Ezrahi, 1990). I will unpack this shift between domains in the next section.

### **The theatre of authority**

Following Shapin and Schaffer, Israeli political scientist Yaron Ezrahi discussed how the scientific “theatre of proof” came to be reframed as a political “theatrics of authority” (1990, pp.108-112). Both these authors are committed to the understanding of empiricism as a way to achieve epistemic authority and trustworthiness. But their works are concerned with different settings: the theatre of authority does not concern scientists or experimental philosophers but politicians in mostly liberal democracies at the end of the 20th century. In

the “theatre of authority”, the political performers achieve trust through the intensive use of science and technology rhetorics, modes of persuasion and devices: their credibility is sustained by their “symbolic functions” (Ezrahi, 1992, p.365) in bringing objective knowledge (Daston and Galison, 2007).

Compared to the “theatre of proof” where the embodied performance of the experimenter is central to the success of the performance<sup>8</sup>, Ezrahi insists on the fact that when a political performer uses a device - something mundane as a report - their action is depersonalised. What is judged first is the political action through the use of the prop then the performer plays. Contrary to the “theatre of proof”, in the “theatre of authority” less efforts of demonstration and explanation are made by the performer: the idea is letting the device do the demonstrative labour. Through this depersonalisation, a liberal democratic State tries to solve the issue of establishing politicians as the accountable agents of public actions: the device will first be responsible. Therefore, the depersonalisation process has a pernicious effect since it is blurring the allocation of blame and responsibility: whom to criticise? Who is in charge: the performer or the device? Moreover, this depersonalisation is paradoxical because it is bringing both a visible proof to the citizens gaze while creating a distance where what is seen is not the performer anymore but the device that has been used. This element will be central to investigating the contemporary “theatre of transparency” where it seems that devices are demonstrating less and less knowledge but rather simply communicating it.

This apparent “impersonal style” of public demonstrations (Marres, 2012, p.86) must centralise our concerns on the evaluation of the performer’s device, on the visibility it gives to political accounts as well as on what kind of participation it offers for the citizens in the use of their attestive visual capacities. In his anthropology of window displays, Franck Cochoy (2016) shows well how the window used as a “prop” to display objects needs to stand for the

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8 - Latour insists on Pasteur’s eloquence and his violent discussions with critics.

whole demonstration of what is to be sold. In the configuration of the street window display, there is no more performance from the shop owner: this labour is delegated to the window display — which means that the accountability of the person that is truly responsible for the performance is more difficult to reach (Cochoy, 2016, pp.95–96).

Moreover, in Cochoy's description, the witness forgets itself because the street is an anonymous space. Everything is happening between the objects exhibited and the witness through the window display: the performer from the "theatre of proof" is not anymore mandatory for the show. The making of the "theatre of authority" then becomes an organisation between a performer (for example the shop owner) and its device (the window). Reframed in theatrical terms: transparency is managed by a stage manager and its prop. But what the witness often only sees is the prop: the performer becomes an invisible stage manager.

For Ezrahi, the excess of visible proofs made in the name of a metaphorical "transparency" is a way to hide performers. Therefore, this depersonalisation through an exhibition is the core of transparency aesthetics and style. Again, as I argued in the beginning of this chapter the formal effects of transparency nurture its metaphorical uses. The theatre is this configuration ordering the depersonalisation, foregrounding the authority of devices and backgrounding politicians strategies. In this "theatre of authority", the authenticity and trustworthiness of the performer matters less than the quality of the proof witnessed through a visual device.

This shift in the attentional regime of transparency from the performer to the prop has already been studied by STS scholar Stephen Hilgartner in his analysis of the USA National Academy of Sciences "authoritative reports" on Diets and Health (Hilgartner, 2000, p.42). In his book *Science on Stage: Expert Advice as Public Drama*, it is the reports created by eminent scientists that

performed the labour of backstaging the decisive negotiations leading to the creation of these documents.

In this section we have seen that performances of transparency took place in a quest to achieve authority on a battlefield of contestable knowledge claims. While the theatre of authority used the same empiricism and instrumentalism as the theatre of proof, its method of depersonalising political actions through devices informed us on the growing technical standardisation of public performances. In the next section I develop how the “theatres of proofs” and “authority” gave me elements to specify the operationality of the “transparency theatre”.

### **Searching for the theatre of transparency**

All performers in the theatres of proof, authority and transparency are concerned with the same elements: the realm of appearance; social persuasion and its credibility; discourses rooted in an optical imaginary of knowledge production; and finally, proofs addressed to an audience. By orchestrating experimental and performative events, they all in different ways inherit from the modes of representation of scientific demonstrations. Performers in the three theatres have the same goal (achieving authority), use the same techniques (an empiricism and instrumentalism) but their operationality is different.

Contrary to the “theatres of proof”, but similar to the “theatres of authority”, my hypothesis is that the “transparency theatre” is not really demonstrating knowledge but communicates it and asks the audience to make sense of it. The attempt to convince seems less present in the “theatre of transparency” than in the initial scientific “theatre of proofs”. Citizens must see for themselves — could have said Yaron Ezrahi. In this sense, the “theatre of

transparency” appears to be very close to Ezrahi’s “theatre of authority” but my hypothesis is that the contemporary sublime discourse of transparency is more than managing visibilities: it is also transforming transparency practitioners and reconfiguring the relation with the citizens. This process will be investigated in Chapter 4.

If the performer does not demonstrate and justify the disclosures but only communicates them, in the “theatre of transparency”, the labour of the disclosure exegesis seems to be delegated to the public. This delegation already put in practice in the “theatre of authority” will be empirically investigated in Chapter 5, where the role of Etalab in this process of delegation from administration to citizens will be inquired. If a device has now replaced a performer in performing the labour of “transparency”, a confusion of what should be made accountable emerged: is it the object of transparency, the device of transparency or the distant performer?

These shifts in the analytical focus of transparency complexify the witnessing tasks of citizens. To tackle this issue I will consider transparency as a heterogeneous practice where an analysis of transparency efforts could have different points of attention operating at different scales and temporalities. While Chapter 4 will focus on how actors construct algorithms as objects of transparency, Chapters 5 and 6 will unpack the dynamic workings between the uses of devices and the accountability of the performer. Chapter 6 will be more specifically centred on the heterogeneity of devices, their operations in multi-locations, similar to Andrew Barry’s views on technological zones and Mikkel Flyverbom’s vision of transparency governance.

Just like the previous theatres, the new knowledge made public in the “theatre of transparency” may be justified by an instrumentalism infused by information liberalism: disclosed data might feed other purposes than accountability, for example, an algorithm source-code can be improved if made

accessible. In such case, the political question becomes: is the new knowledge disclosed useful for a moral evaluation of the performer or does it serve other purposes? The emergence of algorithmic transparency in France reviewed in Chapter 4 will unpack the different justifications leading to open disclosures of administrative algorithms. Chapter 4 will also spend some time in analysing the attractive dimension of transparency and its role in legitimising the algorithmisation of the State.

In a “theatre of transparency”, it is asked of the performer to produce self-recognition, reflexivity and a self-description loyal to them. The self-description is then communicated as a performance or a *re*-presentation since it is always the “reframing of a reframing” (Smith, 2009, p.453), a copy with variable degrees of fidelity. Moreover, self-recognition brings self-distance and creates the opportunity for the performer to tactically plan how they will publicly appear, what will be made public and how — this is an effect of the performer’s “theatrical self-consciousness” (Goffman, 1959). As a consequence, the planning of transparency gives a space and a time to the performer to test and envision their role: it means that the performer can use transparency as “a narrative structure entailing time” (Strathern, 2000, p.310). Chapter 6 will investigate this temporality of disclosures and their effects on citizens capacities to witness.

To summarise, searching for the “theatre of transparency” means to investigate its rhetorics, modes of social persuasion, and the role of devices in the temporal sequencing of the events of disclosures. It also means investigating the making of transparency as a process involving actors’ delegations of reflexivity and exegesis, the explanations or justifications of disclosures and tactics to produce a particular effect on the audience. What I particularly learned from Shapin and Schaffer, as well as from Yaron Ezrahi is the key role of devices and embodied performances in performing the ideal of transparency and orienting the political witnessing experience of citizens. Before we move to



the presentation of a methodological approach and language for investigating the theatrics of transparency, I must first summarise the key learnings of this chapter.

## Conclusion

The chapter has examined the two core concepts developed in the thesis: the democratic virtue of “transparency”, and its enactment in a “theatre”. This literature review has unpacked the classical operability of any transparency regime in democratic context: science and technology bring new means of witnessing through disclosures generated by devices seen as trustworthy because the elements they bring are publicly experienced with our sight. I therefore argued that transparency ideals are nothing without strategies, devices and governance mechanisms. In short, without organisational *practices*, transparency is nothing less than an abstract virtue, and without public *performances* actors could not be evaluated as morally accountable.

The chapter first described how transparency is often understood either as a form of publicity, visibility or openness and could be achieved through reporting practices and institutions regulating accountability. Each way of understanding transparency produces a particular type of public demonstration: publicity brings evidence to be evaluated, visibility brings actors in view, openness sheds lights on internal organisations. The STS literature helped to trace the trajectory between the early scientific experimental forms of public demonstrations — what sociologist Bruno Latour has labelled as the “theatre of proof” (1984) — and their influence on the enactment of transparency in liberal democracies — what political scientist Yaron Ezrahi has identified as their “theatrics of authority” (1991). I have introduced the concept of the “theatre of transparency” as a useful way of understanding the role of disclosures in convincing citizens that public sector organisations are accountable for their algorithmic decision-making. The methodological implications of adopting such a performative approach will be developed in the next chapter.

## Chapter 3: Researching Algorithmic Transparency

### Introduction

In the previous chapter, I reviewed the key concept of the thesis: transparency, as well as its different meanings and associated notions, and the way it is configured as a theatrical performance in practice. In this chapter, I will explore the methodological approaches available to empirically study transparency practices, as well as algorithms and how they inform the choice of methods I have used to gather empirical data and materials on the politics of algorithmic transparency. In this enterprise, I first encountered an empirical difficulty: since transparency is an abstraction difficult to be rendered observable in the fieldwork, how can we study such an evanescent phenomenon? The complexity of investigating the materialisation of this ideal was overcome when I gradually understood that transparency practices and objects were theatrically performed. For example, the opening anecdote about the nursery manager is a typical manifestation where a civil servant staged an administrative procedure as an “algorithm”.

Once I gradually understood that in order to practice transparency, actors were obliged to stage their actions, my first empirical difficulty in investigating this ideal was overcome. I then started to describe the observed performances by specifying them with a theatrical vocabulary delineating the different staging techniques used by actors. To explain what I mean by this, in the first part of this chapter I will discuss how the context of my study, the roles I played and sites I investigated pushed me to adopt a performative approach (Albu, 2014. Albu and Flyverbom, 2019).

In the second part of the chapter, I will clarify my commitment to a performative approach by delineating four dimensions to the transparency theatre: the use of rhetorical discourses, the *mise en scène* of disclosing actions,

their ordering across time and the presence of algorithmic *characters*. Each of these dimensions constitutes a technique or method configuring the performances of transparency.

As I will discuss in more detail below, algorithms are similar to transparency ideals, in that their definitions and meanings are heterogeneous. Moreover, they are difficult objects to access for an ethnographer positioned outside of public sector organisations. Throughout my study, the entity “algorithm” was invoked in ways that exceeded its status as a digital object. For example, in the opening anecdote of Chapter 1, the bureaucratic mechanism of daycare places allocation becomes an “algorithm”. It also means that algorithms could not simply be defined as scientific and technical artefacts. These types of observations lead me to develop an empirical approach designed to track the multiple meanings of algorithms across domains. In the third part of this chapter, I label this approach a “post-digital ethnography of algorithms” in reference to “post-digital” aesthetics and media studies (Cramer, 2015; Berry and Dieter, 2015). Before introducing my fieldsites and fieldwork in more detail, I will first present two methodological approaches to the study of transparency.

## **I) A performative study of transparency**

### **Evaluation vs. Performativity**

As discussed in the previous chapter, following a classification of approaches to the organisational study of transparency (Albu and Flyverbom, 2019), I adopt a “performative” mode of study distinct from an “evaluative” posture. The evaluative attitude can also be labeled the “verifiability approach” because of its focus on how information is disclosed to demonstrate and verify that something is true, accurate, or justified. By adopting this approach, a

researcher comes to evaluate the integrity, consistency and loyalty of an organisation that took transparency commitments. Even if my overall approach is performative, my fieldwork forced me to engage with the evaluative mode of inquiry since this stance is aligned with the theory of change adopted by actors studied in the field. Indeed, like many other transparency practitioners, Etalab wanted to evaluate and verify the effects of transparency. Since my aim was to describe how transparency is performed by actors I needed to understand the way they thought that transparency could produce a change and could settle political struggles. Methodologically, I am investigating how a performative sensibility can more accurately shed light on the modes of practicing transparency and on the constraints and limits of its effects. In short, the performative stance can improve the evaluative one. More generally, I believe that understanding and participating in the evaluative efforts of actors is a condition of a collaborative ethnography.

The performative position states that transparency concepts and speech “do things” (Austin, 1962), they do more than usually expected: they transform their environment and generate a new state of affairs. Transparency is not just a passive communication, it is a reorganisation. While an evaluative mode of researching transparency only seeks to *evaluate the reasons for success or failure* of a transparency initiative, a performative approach situates *transparency as a transformative practice* setting new relations, generating projects and reconfiguring fields of practices (Strathern, 2000b; Garsten and Montoya, 2008; Albu, 2014; Flyverbom, 2019). The performative stance considers the processes of practicing transparency as acts which may bring about or “realise” a new reality. Transparency performances do have effects and shape “the elements that constitute knowledge of political reality” (Ezrahi, 1992, p.365). In short, by adopting a performative approach, I am more interested in noticing the *unanticipated effects* of transparency, whereas a verifiability approach is more focused on evaluating its *conventional outcomes*. My intuition is that these unexpected effects are not accidental events happening at the margins of

transparency practices, but elements strengthening the projects of actors pursuing them. Transparency initiatives reorganise contexts and create new contexts for action beyond the settlement of disputes: the performativity of transparency is then transformative and creative.

The performative approach considers the object of transparency as an unstabilised entity that gets transformed throughout the process of its exhibition and communication to a public. On the contrary, an evaluative approach would think that an object of transparency has a particular stable materiality that simply needs to be uncovered and made public. Indeed, most of the time, actors of “algorithmic reformism” (i.e. task force enforcing ethical guidelines) understand algorithms as lines of codes in a software stack (for a critique on this position see, Seaver, 2017 and; Polack, 2020). As I will argue later in the chapter, a performative inquiry will consider algorithmic transparency a quest whereby the algorithm will be enacted during the practice of transparency understood as a process of “recognising” and “identifying” (Flyverbom, 2019, p.56) and making things “explicit” (Muniesa, 2011). In this light, performative acts do not express an internal identity but instead they perform this very identity (on this point, see Butler, 1990). In the words of organisational scholar Oana Albu: “transparency is a process that modifies an object or subject at the same time as it renders it visible” (Albu, 2014, p.87). As we will see in Chapter 4, the stabilisation of the algorithm is coming from particular practices (for example, the introduction of a regulation) and enables inquiry into how the creation of such an entity is enabled by performative practices. My empirical study of the emergence of algorithmic transparency will be a moment where conflicts about how to figure this new entity will arise: different actors will “struggle to gain control over the representation process” leading to the stabilisation of algorithms (Albu, 2014, pp.93-94).

Regarding how to make an object “transparent”, an evaluative approach tends to conceptualise transparency as a *disclosing process* or more broadly as an

attempt to resolve information asymmetries between actors (i.e. Bushman et al., 2004; Eijffinger and Geraats, 2006). On the other side, my performative perspective describe the manufacture of transparency as a complex *rhetorical, social, technological and temporal process*. Put differently, the evaluative approach is centred on information delivery while the performative one is focused on theatrical staging. I try to understand how discourses, social persuasion and technological devices participate in the performances of transparency and how the demonstrative power of disclosing acts has effects on the way citizens can or cannot become political witnesses. This understanding of transparency is rooted in the dramaturgical analysis of organisational practices inheriting from Erving Goffman (1959). Building on this, Muniesa defines the theatrical performativity grounded in Goffman works as: “the idea of practice as ongoing accomplishment, as acting and staging in an almost explicitly theatrical sense – or at least one that considers the practical and situated features of sense-making in ordinary life” (Muniesa, 2014, p.11).

Following Muniesa, I understand the performativity of transparency as processual, practically enacted, situated and theatrical. To summarise, by adopting a performative approach I am more focused on the *how* of transparency — how is transparency performed? — whereas an evaluative approach is more focused on the *what* of the disclosure — what is the content of a transparency initiative?

While a verifiability approach takes as a condition of transparency the *quality and quantity of information* (i.e. Gray and Kang, 2014), a performative one is focused on the *conflicts and tensions* occurring in the creation of the disclosure (i.e. Tsoukas, 1997). According to this, my attention will be more directed towards how devices of transparency are created and mobilised in order to become politically (in)effective — what are their consequences for the conditions of witnessing? — rather than on evaluating the actual depth and scope of disclosures they bring. However, I will pay attention when transparency

witnesses observe a lack of transparency and when they demand for full accountability — these are moments when I adopt an evaluative approach. Nevertheless, my intention is not to primarily position transparency as a way to reach a certain access, literacy and expertise regarding algorithms, but to envision what kind of effects the performance of transparency is generating.

Regarding the consequences of a transparency initiative, an evaluative mode of research will try to describe if a disclosure modifies a state of affairs in *bringing clarity, efficiency, trust or better conduct* (i.e. das Neves and Vaccaro, 2013), whereas a performative mode of study will pinpoint if these attempts to transform a state of affairs creates *paradoxes* (e.g. Tsoukas, 1997), *unexpected consequences* and new *fields of actions*. Here a transparency initiative not just depicts but also complicates and creates.

The main paradox of a transparency initiative as understood through a performative lens is the counter-intuitive fact that such projects are also creating closures nurturing secrecy. Such unexpected understanding of transparency is rooted in anthropology. For example, Marilyn Strathern writes about the “oscillatory effect of superclarity” where an audit could render an organisation “visibly invisible” (2000, p.318). In an article on the anthropology of trust, Alberto Corsín Jiménez suggests that “the visible and the invisible play out as reversible idioms” where appearance could at the same time hide and reveal dimensions of an object or process (2011, p.191). Organisational anthropologists Garsten and De Montoya (2008, p.283) saw the environment created by transparency initiatives as a “play of shadows”. As a consequence, the public confronts the “veil of transparency” (West and Sanders, 2003, p.26) but this façade is not simply a cover, it refracts information in particular directions. Put differently: transparency is orienting what is made visible (Flyverbom, 2016, 2019) through the “structure of the veil itself” (Bennington, 2011, p.31).

Finally, while an evaluative-verifiability approach is mainly oriented to search *how trust can finally be secured through more transparency*, the performative approach I am adopting takes for granted that distrust is pervasive and moves on *to study how it is creating a particular political climate* colouring the practice of transparency. A performative mode contests the theory of change promoted by transparency advocates: the belief that more transparency will necessarily bring more accountability and trust (Taylor and Kelsey, 2016). There is in fact a lack of robust empirical studies demonstrating the links of causality between these three elements (Schnackenberg and Tomlinson, 2014), especially when what needs to be made explicit is an algorithm (Annany and Crawford, 2018).

In conclusion, adopting a performative approach will enable us to specify how transparency orients capacities to scrutinise and enable transformations. This approach is focused on unpacking: the conflicts and tensions of transparency-in-the-making; the rhetorical, social, technological and temporal processes used for its theatrical performances; the paradoxical implications and surprising effects generated by its practice; its negotiated nature and ambiguous relation with secrecy; and finally, its active role in transforming what it is supposed to represent. The generative creativity of transparency performances are a reorganising force achieved in practice through a bundle of situated stagings. Hence, the performativity of transparency is twofold: it may intervene in the ontology of its objects, and be active through a theatricalisation of actions. These are two distinct but complementary dimensions of transparency enactment.

In the following sections, I will start by introducing how I accessed Etalab as a fieldsite and then turn to explaining how the roles I adopted all along the study were useful positions to navigate between French actors involved in algorithmic transparency.



## Access: negotiating a place at Etalab

My involvement at Etalab comes from a proposal made to me by Isidore Baudoyer, strategic counsellor at this agency, the French open data task force part of the French digital directorate (DINSIC). Etalab is a service of the Prime Minister working as a support and service for the coordination of open data policies at the State level. Institutionally it is an inter-ministerial task force operating in collaboration with a network of referents in all Ministries (Goëta, 2016, p.58). The team is composed of circa thirty professionals ranging from open data managers and lawyers, to data scientists and web developers. The organisation contributes to the implementation of international "open government principles" materialised by projects fostering the transparency of public action and the use of digital technologies in administrations. Its main activity is to maintain State open data portals. Its flagship project is "Entrepreneur for the general interest", an innovation program recruiting external talent to "solve", through their digital skills, challenges of general interest faced by public departments.

In 2012, Isidore Baudoyer published the first book written in French on open data. In 2015, he wrote another volume focused on open innovation business models taking advantage of datafication. He is known as one of the most important experts and consultants in the field of French digital innovation. Although his books are not scientific *per se*, he is a practitioner and strategist of open data attentive to academia. Before I began the fieldwork, I worked with him in 2012-2013 when I was on an apprenticeship contract at the think-tank *Fondation Internet Nouvelle Génération* (FING). At FING, we worked together on improving the data literacy of civil society communities by developing distributed local workspaces for data management. At that time Etalab was restarting thanks to the appointment of a new director, and more broadly, the idea of having an experimental "lab" was burgeoning in many sectors of

innovation — it was the creation peak in France of smart city labs, fablabs, public policy labs, etc.

The fact that I already knew Baudoyer facilitated my interaction with him during the early phase of the fieldwork. It certainly permitted us to attain a necessary level of familiarity facilitating the ethnographic enterprise. When in late 2017 I was searching for a fieldsite, I was put in touch with Baudoyer by Sarah Labelle, an Associate Professor in information science from Université Paris XIII who had recently finished an ethnography at Etalab (Labelle, 2016). Using a Foucauldian analysis (Foucault, 2001; Foucault, 2019), Labelle described Etalab as “an administrative and political heterotopia” (2016, p.1). She emphasised the capacity of the task force to propose “desirable” practices (i.e. State startups) while being a hybrid space both at “the heart and margins” of executive power (2016, pp.7-9). Importantly, she already pointed to elements that I would later develop in my thesis, for example, the idea that the task force is encompassing incompatible objectives (i.e. silently supporting conservative administrative actions while pushing for citizen empowerment). For Labelle, Etalab’s unique role as a support and advising service fosters its potential to fight the slow temporality of policy action with a “panoply” of events (2016, p.10). Finally, the task force’s commitment to information liberalism and the “openness” agenda paradoxically generates new closures limiting its capacity to “hack” the classical administrative culture (Labelle, 2016, p.11).

The fact that a researcher had already been involved in the organisation also facilitated the team’s understanding of my status and objectives. Thanks to Labelle, I presented to Baudoyer my research interests during a meeting on the 19<sup>th</sup> of December 2017. At that time, Isidore Baudoyer was in charge of helping French public administrations make their algorithms more transparent. To contextualise this mission, Baudoyer started to explain to me that in 2016 France was leading the Open Government Partnership and organised its summit in Paris. Following this event, France made a list of commitments to develop and

foster algorithmic transparency. I learned that the Open Government Partnership was a consortium of over 70 countries willing to enhance the openness, collaborative governance, and transparency of their states through the uses of open data and digital technologies. Two of these commitments concerning the transparency of public algorithms were taken during this event by Etalab on behalf of the French government. The commitments represent rights and duty to acts on behalf of French government regarding the enhancement of algorithmic transparency.

During my first encounter with Baudoyer, he proposed that realising these engagements could be the object of my inquiry. He also informed me that these two commitments had been decreed on the 16<sup>th</sup> of March 2017 in the Code of Relations between the Public and the Administrations (CRPA). An important novelty of this regulation is the institutionalisation of a “Right to Explanation” of algorithmic decision-making. Indeed, the article R.311-3-1-2 of the CRPA states what citizens can ask the administrations to disclose:

- “1° The degree and mode of contribution of algorithmic processing to decision-making;
- 2° The processed data and their sources;
- 3° The processing parameters and, if applicable, their weighting, applied to the situation of the person concerned;
- 4° The operations performed by the treatment” (CRPA, 2017)

After having briefly described the legal and political implications of this new Right to Explanation, Baudoyer proposed that my PhD research could involve working with him on this topic. The day after the meeting, he shared with me by email his ideas regarding this challenging project. In his words, below are the constraints and opportunities guiding him at that time:

“To summarize so far, I have:

- precise legal obligations and thus a strong incentive to act for the administrations on the transparency of their algorithms,
- requests from administrations to operationalise these obligations and the necessity to design practical tools in order to achieve this goal (for example a guide),
- a public engagement which is also a “right / duty” for Etalab, a commitment taken after the OGP [Open Government Partnership Summit in Paris, 07-09/12/2016],
- a possible working group to start working on this subject (the network of open data administrator situated in each ministry),
- a first experience on the conditions of opening public algorithms with the case of *Admission Post-Bac* [the public system ranking students and allocating them a place in universities].”<sup>9</sup>

As a balance to the first summary of the project shared by Baudoyer, below are elements he did not yet have and that could help tackle the challenge of algorithmic transparency:

“I haven't (yet):

- a determined working plan or timetable, despite Etalab commitment to deliver it [the guide?] in 2018,
- a very clear commitment with Ministries we want to involve in the project,
- a dedicated task force on this subject, if not the goodwill of my fellow developers and lawyers,

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9 - Personal communication with Isidore Baudoyer, 20/12/2017. Translation of the author.

- an ability to think and work on the design dimension of building interfaces for transparency.<sup>10</sup>

The fact that Baudoyer asked me to work with him and the way he followed up in such a detailed and structured manner, I believe, showed that he was truly motivated to involve me in Etalab efforts towards enhancing the transparency of administrations. I also believe that it was because I introduced myself to Baudoyer not only as a PhD student but as someone with an information design training, that he identified me as a potential collaborator. He framed my possible involvement as an *evaluative intervention*: prototyping web interfaces as new forms of transparency devices could be a way to evaluate their effects. My interest in interfaces and training sufficiently convinced him of my ability to deal with design work. But I have the feeling that his perception of my professional identity shifted several times during our first meeting.

Regarding the role of design in enhancing algorithmic transparency, Baudoyer suggested that making the parameters and functionalities of an algorithm public and understandable was a design challenge in itself. From my perspective, he *staged* the algorithmic transparency issue and the solutionism of design as a way to enrol me in his project. For him, Etalab had to go beyond the writing of reports and guides, making public algorithms more transparent required the imagination and creativity of design workers. Regularly facing criticism for being slowly internalised in bureaucracy, it was a moment when as an organisation, Etalab had to perform and legitimise its status of “lab”. At that time Etalab did not employ a designer, so adding this expertise to the team was attractive to them and could help in *performing* the organisation as a “lab”. These elements explained why he took the opportunity of my PhD project to invite me to work with him on the challenge of enhancing algorithmic transparency. In short, he acknowledged that he could learn something from me, and he was open to give me a space yet to be negotiated in his project.

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10 - *Ibid*

The way we formalised and negotiated the condition of the fieldwork was through writing a “convention of cooperation” signed between the Centre for Interdisciplinary Methodologies (CIM) at the University of Warwick, and the service leading Etalab, namely the general digital directorate of the French state (DINSIC). The convention started by stating the detailed objectives of my study:

- “to shed light on the conditions for opening the algorithms of public administrations, in collaboration with the Commission of Access to Administrative Documents (CADA) and the ministries involved in this project,
- to understand the dynamics of collaboration with external actors (such as ministries, associations, researchers, designers, developers, etc.) that the mission [Etalab] will adopt in this project,
- to study the role of making available and reusing public data on algorithmic subjects (e.g. source code of state calculators),
- to identify the principles of action and models of transformation that are latent but not yet made explicit in this project...”<sup>11</sup>

Then a summary of the core objective engaging both me (representing CIM) and Isidore (representing DINSIC) was stated in this way:

“[the study aims] to understand how the Etalab mission is located as an interface between the administrations, their algorithms and associated data, and civil society. [...] DINSIC will give to Loup Cellard a special access to the places and data of the study that will allow him to reach the objectives mentioned in the preamble of this document. [...] Thanks to his skills in sociological investigation, “design research” and his understanding of transparency initiatives, Loup Cellard will accompany

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11 - Contract of cooperation between CIM and DINSIC, p.2

Isidore Baudoyer in the definition of a methodology for opening public algorithms.<sup>412</sup>

In terms of the practical conduct of the study, it was stated that I would spend three days per week at Etalab offices situated in the seventh district of Paris, and that the study would last six months — from May until October 2018. At CIM, the convention of cooperation has been reviewed and signed by one of my supervisors, professor Noortje Marres. At Etalab, it was reviewed by Isidore Baudoyer and the chief jurist Jean-Jacques Bixiou, then signed by their supervisor Henri Verdier, head of the DINSIC. Now that I have contextualised the way I accessed Etalab as a fieldwork site, I present in the next section the different performative roles I took on during the inquiry.

### **Roles: navigating in the shiftings between expertises**

This section presents the three roles I adopted during the empirical study: ethnographer, designer and freelance consultant. At the beginning of my study, I thought that designing interfaces was a way to provoke devices to be *evaluated* for their capacity to enhance accountability. The paid freelance analyst role, which I adopted only after the contracted ethnography, will led me to in give a first *evaluation* of the FOIA requests targeting administrative algorithms. In contrast to this, my ethnographic stance pushed me to be sensitive to the *performative* enactments of transparency — this stance became my main approach to conduct the inquiry.

Each of the above positions constitutes the theatrical “social roles” I played in order to conduct the study. Following Goffman (1959, p.9) they could be defined as “the enactment of rights and duties attached to a given status”. Each of these professional roles was a different passport to travel inside the

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<sup>12</sup> - *Ibid*, p.2-4

fieldwork. In this section I will argue that the shifting between these different positions created interesting frictions indicating which professions are considered legitimate for intervening inside transparency politics. The performed image and effects of these roles put me on the path towards adopting a theatrical approach. The authority given to each role ordered how I could have access to the entities that could not be made fully public, in my case, algorithms. In other words, the frictions between roles had implications on how I could access certain places of ethnographic observations. More broadly, they helped to specify the way certain types of experts (and not others) are called to intervene in the practice of algorithmic transparency, and the way each of them have different visions and practices to achieve it. By giving a reflexive account of my roles as ethnographer, designer and freelance consultant “the politics and ethics of working in any one [role] reflects on work in the others” (Marcus, 1995, p.113).

We have seen in the preceding section that since the beginning of my involvement at Etalab I was identified as both a designer and ethnographer. An easy way to distinguish the aims of these two positions is to say that my designer role emphasises the *participatory actions* I undertook inside the organisation while my role as an ethnographer relates more strictly to my *observing capacities*. This also meant that I classically used the method of *participant-observation* whereby participation is a making activity transforming the site of actions (Ingold, 2013). While this separation between my roles is relevant, it is also too simplistic. To unpack the heuristic frictions involved here, the first thing to say is that the easy formulation of the *designer-ethnographer* as a *participant-observer* is reductive. Indeed, as noted by ethnologist Jeanne Favret-Saada: “observing while participating, or participating while observing — this is about as straightforward as eating a burning hot ice cream” (Favret-Saada, 2012, p.438). Drawing a line between a reflexive inquiry and an engaged contribution in the field proved challenging in my study, especially since designers are exemplary reflexive practitioners (Schön, 1984), and since anthropology has largely advocated for positioning ethnography not simply as a recording/documentary



practice of data collection but as a transformation of the sites of investigations where the ethnographer is put into an apprenticeship attitude towards what and who is studied (i.e. Lave and Gibson, 2011; Ingold, 2013).

Many ethnographers intervene and collaborate with their so-called “informants”. At the same time, when designers are sufficiently immersed in the fieldwork, they also observe in a particular way (Nova, 2020). For example, in order to make my fieldwork evolve, I occasionally had to transform my ethnographic position of ethnographer-observer into a more proactive role. This even resulted in situations where I found myself pushing Isidore to take certain initiatives, one could say that: I had to motivate him to generate the context of my research. As advocated by French philosopher, anthropologist and sociologist Bruno Latour: “contextualization is fabricated and negotiated like everything else” (Latour, 1996, p.143). As a designer, I also provoked workshops about algorithmic transparency as a way to generate contexts and situations for my ethnographic inquiry.

Such provocations through fieldwork were enabled by the fact that, at Etalab, the issue of algorithmic transparency was not formalised in a proper project, which would have involved the creation of a dedicated team, short-and long-term deliveries, regular reportings, etc. Because of this situation, my fieldwork could only be advanced through contingent meetings initiated by Isidore or me. But like all Etalab workers, he already had a heavy workload<sup>13</sup>. Moreover, most of the Etalab team (including Isidore) was monopolised by another important project: a set of new legal obligations for public bodies summarised under the label “open data by default”. Accompanying administrations in applying this regulation was a priority while helping them to achieve algorithmic transparency was not. Nevertheless, the fact that Isidore and

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<sup>13</sup> - This mix of voluntary overwork and excitement has also been noticed by STS scholar Marie Alauzen in her ethnography of French State start-ups initiated in and around Etalab (Alauzen, 2019, p.136).

I formed an informal team working on this issue had been sufficient to put the subject on the agenda.

Since Baudoyer became my co-investigator on different cases, I therefore oscillated between situations where I was doing an ethnography *inside* an organisation with moments where I was doing an ethnography *with* the organisation. Moreover, I was not solely observing as an ethnographer but I was almost seen and could act as a member of the organisation — in anthropological fashion, we call this “going native”. My discreet appearance as a member of Etalab was simplified by the fact that many of its employees rapidly forgot why I was there, therefore they just took me for Isidore’s intern or assistant. Finally, my inclusion in the team and my legitimacy to approach external members of the organisation was facilitated through the creation of an official email address: [loup.cellard@data.gouv.fr](mailto:loup.cellard@data.gouv.fr).

Now that I have exposed how I operated as an *ethnographer and temporary member* of the organisation, I will expand the description of my role as an *observing designer*. Indeed, when during meetings with jurists and data scientists we envisioned the creation of web interfaces as a way to explain algorithms, my position as an information designer overshadowed my role as ethnographer. As we have seen, the convention of cooperation signed between Etalab and CIM refers to me as a methodologist that could be a resource for imagining innovative or alternative ways to practice transparency. Being a methodologist is also being a potential *evaluator* of the efficacy of transparency devices. Etalab members acknowledged that the ethnography could have important implications for the design of transparency devices while at the same time, they did not always understood my analytical observing skills as both ethnographer and designer — as noted by HCI researcher Paul Dourish there is a classical underestimation of the value of ethnography in technology design (Dourish, 2006). To develop my point, I would say that it is precisely thanks to my *observing capacities* as a designer that I could delineate the constraints,

requirements and opportunities to achieve algorithmic transparency through technological devices. As claimed by information designer Gui Bonsiepe in a text on the role of design in democracy, when designers built artifacts offering new ways of seeing they are well positioned as “strategists of appearances” (Bonsiepe, 2006, p.31). Designers and design researchers have made important contributions in specifying how devices could orient attention (i.e. Bolter and Gromala, 2003; Mollerup, 2019) and order the formation of publics (Di Salvo, 2009; Ricci, 2019).

Moreover, it is also thanks to my capacity to enrich the discussions on the *practical making* of transparency devices that I could access key sites of *ethnographic observations*. For example, as narrated in Chapter 5, during the strategic meeting between the DGFIP and Etalab regarding the planning of the housing tax disclosure, the creation of a web simulator has been evoked. And I have been given the right to attend this meeting because Etalab thought that if we would design a device later, I had to be present at each step of the discussions. Here, it appears clearly that *my practice as a designer* reinforced *my observing tasks as an ethnographer* because the methodological resource of design helps to give a *practice-based account* on the making of transparency. Put differently, being an *evaluative* designer helps to describe the *performative* dimension of transparency, the complex organisational effort and the pressure to design innovative devices.

Despite the enrolment of my design expertise in Etalab’s desire for experimentation, at the beginning of the fieldwork, I judged that it was too early to develop tangible prototypes of transparency devices. As classically described by Paul Dourish (2006, p.5), an important value of an ethnography involved in design processes “might be to recommend what should *not* be built rather than to recommend what should”. At this period, the main obstacle faced by Etalab and administrations was to clearly understand the new regulation and how citizens could use their Right to Explanation — it is this complexity that

justified our meeting with nursery managers, for example. The design of a device would not have been helpful in the enterprise of simplifying the regulation. Moreover, due to the lack of a formal team dedicated to algorithmic transparency, it was difficult for me to present my “proof of concepts” regarding web transparency devices. Since the design of devices and their *evaluation* was not a priority and not practically possible, I then engaged myself in the *performative* approach to ethnographically study how Etalab hoped to perform transparency. I nevertheless developed an *evaluative* analysis on the use of digital interfaces as transparency devices for the French critical theory journal *Multitudes* (Cellard and Masure, 2018).

To tackle the challenge of understanding the regulation, Isidore and I provided meaningful explanations on the regulation after intense sprints spent on analysing the CRPA articles. With the help of Etalab jurists, this work became the official “Guide of Public Algorithms” released by Etalab in March 2019. In this context, my initial interest in the digital design of transparency devices has been redirected to understanding the precise opportunities and constraints for algorithmic transparency provided by the regulation. To summarise, I came at Etalab to work on inventive web interfaces, but my work came to focus on the Right to Explanation of algorithmic decision-making. Put differently, I started the inquiry as a PhD student with a background in information design and I left it as an ethnographer concerned with the importance of legal knowledge for conducting inquiries on algorithmic transparency. Indeed, the main device of the transparency theatre, namely, the Right to Explanation is a legal instrument. Moreover, as we will see in Chapter 4, administrative codes and regulations set definitions and ontologies of algorithms that will order how citizens could claim for true accountability. Being sensible to the details and effects of these definitions is mandatory to describe how algorithms are constructed as objects of transparency.

Learning about legal issues overwrote my initial aim to develop digital interfaces. What also limited my implication as a designer is a pervasive division of labour well known in digital culture: there are those who code and those who do not. The data scientist in charge of developing the housing tax simulator did not want my help because she thought that I could not code (although it is true that I do not have data science skills, I do have expertise in user research, web design and programming that could have been beneficial to the project). This anecdote epitomises “the cultural imaginaries and micropolitics that delineate design’s promises and practices” (Suchman, 2011, p.3) in a context where data science is getting more and more agency in public bodies to somehow “fix” algorithmic transparency using engineering approaches.

Let me now develop the last role I took, the one of “freelance consultant”. This came after the end of the “convention of cooperation”, when Etalab commissioned me for two paid jobs: the writing of a white paper to analyse the uses of the Right to Explanation by citizens (Cellard, 2019), and the organisation of a conference on algorithmic transparency<sup>14</sup>. Of course, in fulfilling the tasks I could say that I was doing “more than ethnography”. But the paid missions also led me to continue the fieldwork in another mode of engagement. Similar to my involvement as a designer, I was an external resource *evaluating* the practice of transparency and providing advice regarding improvements and alternatives. The white paper provides advices on ways for citizens to enhance their understanding of the regulation. As a freelance consultant, I was clearly contributing in an *evaluative* mode to the study of transparency, but this activity generated further sites for the study of transparency *performances*. The presentation of the white paper to Etalab and to the administrative regulator (CADA) constituted ethnographic sites of observation in themselves. Regarding Etalab, it led me to understand the limits of the team's will and capacity to perform algorithmic transparency in an

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<sup>14</sup> - Atelier-débat "Histoire(s) d'algorithmes publics", 29/11/2019, for more information: <https://www.eventbrite.fr/e/billets-atelier-debat-histoires-dalgorithmes-publics-82962574293#>.

organisational context where the task force is a service attached to the Prime Minister. My meetings at the CADA enriched my understanding of the bureaucratic obstacles and legal limitations blocking the achievement of algorithmic accountability.

My last implication in the field as a freelance researcher analysing a regulation revealed a tension between doing an ethnography *of* algorithmic transparency and being an ethnographer participating in framing the issue of algorithmic transparency. It emphasised a tension between doing an ethnography *of* an organisation or *for* an organisation (Neyland, 2007b, p.9). While designers are often self-positioned or see themselves attributed the label of ambassadors of users (Nova, 2014, p.32), the role that Isidore attributed to me when commissioning me to produce this white paper, was that of an ambassador of citizens. My role as a researcher-as-consultant was *staged* by him as a form of citizen participation. Remember that one of Etalab's commitments at the OGP was that algorithmic transparency should be developed through citizen participation. During an interview at the very end of the fieldwork, Isidore acknowledged that my white-paper was positioned as a proxy for citizen contributions. This explains partly why he did not want Etalab to appear as the main publisher of the white-paper. Indeed, in the final version of the document, Etalab appears as the research sponsor but paradoxically, an explicit mention at the very beginning withdraws its responsibility from the study results. While Etalab agreed my findings and arguments, the organisation could not risk being seen as the publisher of a study that points to the dysfunctions of administrations and regulators. If Baudoyer was accountable in front of the OGP to perform citizen participation, I must be accountable in front of academia for how I could personify citizenship: the theatre of transparency has a specific politics of representativeness that requires attention and reflexivity (see Kimbell, 2018, p.310)

To summarise, the shifting between the different research positions and approaches enriched my ethnography and helped me to experiment my performative approach to the study of transparency. The roles allowed me to act with different legitimacies and to cross different domains such as a service of the Prime Minister helping administrations to achieve transparency (Etalab), workshops where citizens faced the opacity of an algorithm, and a regulator applying the Right to Explanation (CADA). Finally, the friction between my positions and those of other practitioners revealed the opportunities and difficulties to involved in organising collaborations between the legal, design, data science and ethnographic expertises. In the next section, I present how I approached Etalab as a site of study.

### **Sites: mapping algorithmic transparency in and around Etalab**

In an attempt to not reify “algorithmic transparency” as a fixed and evident issue, I followed two advices from philosopher of science Ian Hacking as stated in his article dedicated to the study of objectivity: “let us get down to work on cases, not generalities” (2015, p.29) and “let us stick with ground-level questions” (2015, p.20). This approach naturally led me to engage with Etalab’s pragmatic questions and my exploration of the field oriented me to take the housing tax algorithm as a case study. Inspired by Daston and Galison’s book *Objectivity* (2007), Hacking aim was not to define objectivity but to get an understanding of it by studying the sites of its manifestations. I put in practice the same idea for transparency: Chapter 4 will show that even if the fuzzy public controversies regarding algorithmic transparency emerged in France around different topics and settings, since the beginning they all concerned the role of algorithms in administrative procedures. Moreover, the ethnography shows the central role of Etalab in the different controversies — an element that comforted me in choosing the organisation as my main entry point in the study.

In order to describe how the issue of “algorithmic transparency” emerged and how its theatre has been constructed, I had to “follow the conflict” of claims in each controversy dispersed in different settings and moments (Marcus, 1995, p.110). By following the sites, practitioners, publics, and institutions around these public issues, I could see how “transparency” started to be understood. It became my task as an ethnographer to draw together these scattered algorithmic controversies in order to understand their relevance and for the performance of transparency. In other words, my approach follows an ethnographic style of research rooted in multi-sited ethnography where the field is a network incorporating many places that are not connected *a priori* (Marcus, 1995. Burrell, 2011).

We will shortly see that if Etalab was my strategic entry site, I expanded my ethnography into networks involving other actors. It is through the local knowledge produced in and around Etalab that I hoped to understand how transparency is constructed as a problem and performance. In my view, the multi-sited approach resembles with ethnographies grounded in actor-network theory. For example, in his book *Aramis or the Love of Technology*, Bruno Latour explained how the research goal is to draw the context of the inquiry: “What had happened was that the label “sociologist” had been leading me astray from the start. He never used the social context as a starting point. On the contrary, the social context was what he was driving at: he wanted to explain it. [...] In fact, the trajectory of a project depends not on the context but on the people who do the work of contextualizing” (Latour, 1996, pp.138-149).

Chapter 4 tells how Etalab created the context for the emergence of algorithmic transparency. As noted, the main “context” of my research was my collaboration with Isidore Baudoyer — the strategic counsellor who performed “the work of contextualizing”. Here, one key technique from multi-sited ethnography I put in practice was to “follow the people” (Marcus, 1995, p.106), in this case, it meant following Isidore Baudoyer.



Indeed, during much of my stay at Etalab I observed him in his interactions with other stakeholders involved in the complex issues of making public algorithms more transparent. These interactions took the form of informal internal meetings with Etalab teams of jurists and data scientists, data regulators, and other civil servants present in the same building. As it was stipulated in the convention of cooperation, I had access to the shared Etalab environment including open spaces, internal mailing lists, internal chat channels and the general weekly meeting where I could access all Etalab projects and staff.

I also attended meetings outside of the Etalab building. One subset of meetings advanced my understanding of the strategic positioning of French actors involved in algorithmic transparency. Here Etalab was understood as part of a larger network constituted by many “entry points” (Burrell, 2011:190). I followed connections of this network and met the following actors: a think-tank developing a project on the explainability of technological systems (FING); a groups of activists creating an infrastructure for the exfiltration of administrative documents (Ouvre Boite); an NGO focused on the analysis of Youtube recommendation engine ([algotransparency.org](http://algotransparency.org)); a civil society organisation developing ethical guidelines for data scientists (Data for Good); a national consortium on ethical AI (Transalgo); and finally, a research project collecting errors of algorithmic recommendations on social media (Algog glitch).

Despite their dispersed “ground-level questions” (Hacking, 2015), all these French initiatives constituted the “heterogeneous network” (Burrell, 2011) of actors that I found between 2017-2018, configured around the topic of algorithmic transparency. By adopting a multi-sited approach, I then learned to appreciate Etalab as a single site traversed by and traversing a multiplicity of contexts (Marcus, 1995). Finally, I came to understand that the network of actors concerned by algorithmic transparency was relatively small, people knew each

other, and also collaborations turned out to be competitions to maximise the visibility of impacts on the enhancement of algorithmic transparency.

A second type of meeting outside of Etalab allowed me to observe and collect discourses from officials and civil servants regarding the engagements they took or were willing to take regarding algorithmic transparency. I attended the France-UK Digital Colloquium where Ministries of Digital Affairs from both countries — Matt Hancock for UK and Mounir Mahjoubi for France — presented their action for the development of ethical AI. Then, during the Gov Tech Summit 2018 I attended a round-table comparing initiatives of design labs in public services across France and the UK. Finally, I participated in a workshop dedicated to the creation of ethical guidelines for public-sector algorithms organised by a left-wing think tank (Terranova) and which surprisingly took place at the Google headquarters in Paris. These meetings helped me identify the different types of governmental experimentalism nurturing Etalab's commitment to innovation as well as the pervasive performances and publicity about ethical AI. All these events helped me to situate my study in relation to broader debates regarding the politics of algorithms and its relation with the democratic wish of transparency.

To conclude, we have seen that my roles as ethnographer, designer and consultant pushed me to switch between an evaluative stance and performative approach, something which finally reinforced my ethnographic enterprise. If my collaboration with Baudoyer pushed me to be sensitive to an evaluative approach aligned with Etalab actions, I encountered performative actions everywhere: in the way I needed to stage my roles in order to access certain sites of fieldwork, in the way Baudoyer staged me as a citizen, and in the pervasive *mise en scène* of commitments to ethical AI. How to empirically study the performative practice of algorithmic transparency? The next sections will present a set of analytical devices I used during my study. They identify four theatrical dimensions of transparency: the *dramaturgical* discourse of

transparency sustaining a political action; the *staging* of important information through embodied performances and digital devices; the *temporal* enactment of disclosures, and the circulation of algorithms as *characters*.

## II) A theatrical language for the study of transparency

### Dramaturgy: persuasive transparency discourses

The literature review conducted in the preceding chapter has shown that neither the meaning of “transparency”, nor “algorithm” is fixed. Transparency is an evanescent effect difficult to be made observable in fieldwork study, and an algorithm is a technological entity defined by its abstractness and virtuality. If neither object can be easily fixed, we need to follow the appearance of their various meanings dispersed in different discourses and to understand the roles of these rhetorical stagings play as part of an overall performance: how do dramaturgies enrol actors, enable the drawing of boundaries and order the realm of what should be made public? In facing this empirical challenge of observing such uncatchable objects, I followed an advice of actor-network theory during my ethnography: to let actors define entities and to draw the trajectory between conflicting and controversial definitions (Latour, 2005, p.22)

For example, I studied moments when the word “transparent” was used in discourses whether it was attached to positive or negative connotations, when it was mobilised in particular situations, and how it has been staged as a public issue. It appears that transparency shares with objectivity connotations of what is called an “epistemic objectivity” (Rouse, 2008; Hacking, 2015, p.25). Indeed, both concepts are said to positively enhance openness to criticism, responsiveness to evidence and accountability to a mind-independent reality. But when we claims are made for “more objectivity and transparency” the

concepts are better positioned as moral valuation devices that serve to identify, blame and criticise the very absence of openness, responsiveness or accountability.

Reframed in theatrical terms, I would say that transparency has a *dramaturgy*: it is practiced through a text sustaining and composing actions (Freydefont, 2007, p.17). We could say that through its sublime effect, the dramaturgy of transparency is potentially obscuring political actions nurturing secrecy. This performance is theatrical insofar as it will involve a form of dramatisation, a duplicity of actors or at least their attempt to stage discourses of transparency — just like when Andrew Barry (2006) describes a gap between claims of transparency and their actual achievement through devices.

To summarise: dramaturgies of transparency are either devices of persuasion or devices of evaluation. In classical actor-network theory parlance (i.e. Callon, 1984, pp.188–189; Michael, 2016), the discourses of transparency serve to “enrol” administrations and citizens into programs of action, and following Hacking, they help to evaluate a lack of accountability. But from the performative perspective, these attempts to persuade and evaluate can also be considered performative clues ordering the theatre of transparency. Chapter 4 will study how Etalab nurtures discourses of transparency and Chapters 5 and 6 will look at how DGFIP transformed it into a dramaturgy of exemplarity. I now turn to the second dimension of the theatre exposing the staging mechanism where the dramaturgy of transparency is embodied by actors and realized using digital devices.

## Staging: embodied performances and digital devices

In the preceding chapter we have seen that transparency is not about disclosing everything one knows. A performance of transparency is better understood as the organisation of a communication that secures a space for the unknown, for what is not yet made visible. Following sociologist Erving Goffman, I argue that this orchestration of transparency is a *staging* aiming at convincing the audience of certain realities. As Goffman suggests: “The stage presents things that are make-believe; presumably life presents things that are real and sometimes not well rehearsed” (Goffman, 1959, p.vii).

In theatrical terms, the object of the staging is the play, its resource is the actor producing the scenic event (Freydefont, 2007, p.18). Since the everyday playing of social roles is something quite naturalised (Goffman, 1963), contrary to the comedian, the performer of transparency is not always aware of their staging actions and does not necessarily have clear intentions outside of behaving according to a role. Nevertheless, when they are aware of its own staging, we say that the performer reached “theatrical self-consciousness” (Goffman, 1959). Moreover, there are moments in this type of performance where both the audience and the performer know that there is some level of artifice in the performance: then this experience is lived as a demonstration (Perriam, 2018, p.35). Indeed, a theatre always imposes on the audience what dramaturgists call a “suspension of disbelief”. Nevertheless, the question remains whether a performance of transparency is a faithful “presentable copy of the mess” or a distrustful “improvised performance” (Perriam, 2018, p.37). Consequently, we are often aware of the social roles we are playing and playing a character will create a reflexive self-distance for the performer as well as for an attentive public. In Chapters 4, 5 and 6, I will ethnographically analyse clues

indicating this self-consciousness of the performers when I will try to delineate the motivations of civil servants involved in negotiations and performances of algorithmic transparency.

This discussion about role-playing indicates two profound transformations inside the theatrics of public accountability. On the one hand, we witness the theatricalisation of moral behaviours — they need to be visibly transparent since performances of transparency are relational — on the other hand takes place the amoralisation of theatricality, a justified sentiment because appearance always creates a risk of hypocrisy (Ezrahi, 1995, p.302). As brilliantly summarised by Yaron Ezrahi: “The transformation of the idea of the modern individual from a being whose behavior was expected to show congruency between the inner and the outer person as well as consistency over time to a being whose nature and freedom are manifest in changes and mobility between roles depended on a double move to theatricalize overt moral behavior as social and, therefore, inherently hypocritical and, in turn, to amoralize theatrical, social (or political) behavior” (*Ibid*).

The constant theatricalisation of political actions made in the name of transparency always has to face their possible judgement as opportunist and duplicitous moves. In my study, this double movement is taking place on two different stages. Some stages will be everyday face-to-face meetings between civil servants (Chapter 5), and some others are digital stages ordered by transparency devices — an algorithm source-code repository and a web simulator (Chapter 6). No matter the stage, this presumption of artificiality mentioned by Goffman is latent because the performer is facing the pervasive “anti-theatrical prejudice” of Western politics, as explained again by Ezrahi: “the criticism of theatricality in human affairs presupposed both that overt human actions, or rather what is apparent about persons, can deviate from their true reality and that such misrepresentations of persons and actions are essentially corrupt” (1995, p.300).

In my study, the reception of performances will oscillate between two poles, one moment where the audience's presumption and distrust are high, the other where the public will be convinced. To summarise: this duality between giving back information and ensuring inaccessibility is a communication gesture epitomising a moral dualism between what is made public and what is still secret. This dualism epitomises the dialectic of transparency: a performance oriented towards revealing or maintaining ignorance. As sociologist John Law explained: "When orderings of enterprise are performed they drive a *moral* wedge between backstage and frontstage. Indeed, they build a division that is both moral and epistemological between the "real" and the "artificial". Or between what is presented, and what "really goes on" (Law, 1994, pp.167-168).

In my study, I will not treat the Goffmanian back and front "stages" as physical spaces where is respectively played the "conspiracy of the unseen" (Wark, 2016, p.202) and the epiphany of a revelation. I would prefer to consider that certain actions and practices sometimes aided by digital devices become performative actions of back and front staging. Talking about *staging* in the gerund tense emphasised the performances of transparency as a situated process that "activates in the present" the political force of appearance and generates a space and time for witnessing (Lury, 2018, p.4). Considering back or front staging as active performative acts forces us to emphasise the fact that the realm of (in)visibility is constructed in situations by actors and could be described through ethnographic observations.

When the stage is a face-to-face meeting, performers use "impression-management" techniques (Goffman, 1959) to convince the audience of their trustworthiness and capacity to practice transparency. These techniques are related to the perceived authority of the performer's expertise, their social persuasive skills, the ability not to perform unmeant gestures or faux-pas (Goffman, 1959, p.134), and depending on the context, the way they cultivate

discretion (Barry, 2006, p.249) and modesty (Haraway, 1996, p.432). As I argued in the previous chapter, when the stage is a digital playground, technological devices manage the (in)visibility of information (Flyverbom, 2016, 2019) and order the directions of where our visual and political attentions are attracted. To summarise: actions performed on both stages might nurture secrecy. But to produce such effect, the actions taking place on stages are orchestrated through time. This sequencing of disclosures is precisely what I unpack in the next section.

### **Time management: the sequencing of disclosures**

Understanding takes time. But considering transparency as an event and process of time-consuming understanding is often not possible: this intuition must be forgotten because the concept of transparency conveys an image of “immediate” knowing. In asking the “when” of transparency, my aim is to pinpoint the particular temporal dynamics of the “narrative structure entailing time” attached to the enactment of transparency (Strathern, 2000, p.310).

My intention is more precisely to point to the process by which administrations sequence disclosures in a particular way. Making an algorithm public has a particular *rhythm* made of events fixing attention and requesting scrutiny. Chapter 6 will unpack the order in which transparency devices are used in the actors’ attempt to practice algorithmic transparency. Since each event of disclosure both foregrounds and backgrounds certain information, this sequencing will order the citizens’ (in)capacities to witness. Understanding the temporal sequencing of transparency as a dimension of enactment has been so far underestimated by the literature on the topic (except, Strathern, 2000). This omission is better explained by the fact that conventional *evaluative* approaches to the study of transparency position it as a cumulative process (made of a



disclosure and its exegesis), while the *performative* approach I am adopting tries more globally to catch its narrativity orchestrated in different events of disclosure.

Understanding takes time because judging the appearance of a person or a complex object such as an algorithm is not an easy task. For example, in her seminal article on the “tyranny of transparency”, Marilyn Strathern (2000, p.310) points to the ritualised temporal suspensions by which the appearance of New Guinean dancers is judged a long time after their events of display: “My archetype comes from Mt Hagen in the Western Highlands Province, and from the ostentatious display put on by men on public ceremonial occasions in which they present themselves to spectators in order to be judged by their appearance. These are tense occasions: success or failure depends on the audience's verdict, although that is not given at once but is to be gleaned from the behaviour and reaction of individual spectators in the months to come. So while those on display present themselves at a single moment, they are, so to speak, suspended in a timeless frame. They do not know immediately what impact they have made, and indeed their effectiveness is only gradually revealed over a period of time.”

Strathern used this anecdote to point out that similar to the dance of New Guineans, the judgment of audits in UK higher education is uncertain and time-consuming. Strathern points also to the process by which an audited organisation can sequence the publication of audits in several events. The final blaming of a non-transparent organisation could be “suspended” before it finally comes. This delay could have effects on the audience: the intensity of the blame can be reduced since the anger of contestability is passed. Here, the temporality of transparency is a way to pacify the public. I will investigate a similar process of pacification in Chapter 6.

Following Strathern's thought, I would say that not only understanding and judging the effectiveness of accountability could be time-consuming, but so is producing transparency. This has two important consequences for my study: time is a resource used to organise the sequencing of disclosures and having time is necessary for an adequate making of transparency. Consequently, organisations can have strategies of disclosures involving the management of time. For example, a lack of capacity to produce transparency will morph into slow or delayed disclosures. Another example: if an organisation does not have the time to quickly appear transparent, it could rapidly disclose information in order to fix and attract the public in a single event of disclosure while carefully taking the time to cover secrets. In all cases, the temporality of transparency could be a way to anticipate future moral failures (Harvey et al., 2013).

Citizens and organisations intervening inside the theatre of transparency have different assumptions about when they want transparency to be effective. In France, when a citizen is using their right to algorithmic decision-making and requests the Commission of Access to Administrative Documents (CADA), the latter has a month to respond starting on the date of request reception. Here, the practice of transparency comes with a relative temporal pressure — but the CADA is often late and many requests are processed after several months (Berne, 2019). If the CADA finally gives a positive response to the citizen, they will need even more time to claim for more transparency in an administrative court.

Algorithmic transparency is limited by the time-consuming activity of bureaucratic inquiries. My attention in this section was directed on how different stages where transparency is publicly expressed form a temporality of disclosures ordering the sequencing of witnessing events. Now that I have presented the three dimensions of the transparency theatre (dramaturgy, staging and its temporal management), I will unpack how the object of

transparency, namely, algorithms, should be also considered as dramaturgical *characters*.

### **Characters: algorithms as dramaturgical figures**

In this short interdisciplinary account about algorithms, I am going to present different literatures related to this concept and my position in situating it as a dramaturgical character. In her history of rules, historian of science Lorraine Daston developed the idea that algorithms have always been formalisation of rules rooted in the mechanical arts of writing and materialised in formats such as patent law, how-to books, recipes and cookbooks (Daston, 2019). Their essentialisation as purely technical entities is very recent. More generally, the modern understanding of an algorithm arises from the arithmetisation of logics, and the many attempts to mathematically quantify and formalise judgments that took place between the seventeenth and the mid-twentieth century. Computers provided a fantastic tool to accelerate and automate this process (Sack, 2019, pp.79-106).

The contemporary influential definition of an algorithm were laid down during the 1970's in the course of the professionalisation of software engineering (Burke, 2019). This intellectual tradition of computer science advocated for a more limited language of instructions, organised in reusable parts, a way to simplify and solidify the writing of programs. The aim was to transform the way programming languages are organised and structure a top-down approach for planning the building of massive software systems. The definition epitomising this evolution of the meaning and the one we can find in every computer science textbook around the world is from Cormen et al.: "An algorithm is any well-defined computational procedure that takes some value, or set of values, as input and produces some value, or set of values, as output. An algorithm is thus a sequence of computational steps that transform the input into the output. We

can also view an algorithm as a tool for solving a well-specified computational problem. The statement of the problem specifies in general terms the desired input/output relationship. The algorithm describes a specific computational procedure for achieving that input/output relationship” (Cormen et al., 2009, p.5).

This widely used definition of an algorithm put in circulation the idea that an algorithm could be at the same time: a written set of computational procedures; lines of programming code formalising this procedure; and more generally a technological tool used to solve a problem formulated in terms of a relationship between data entry, calculations and outcomes. These three versions emerged during my study: again, algorithms could be figured in different ways. But the computer science vision of algorithms as programming codes has gained prominence since the 1970s — even if it has been recently criticised by anthropology and empirical STS studies.

One main criticism of these disciplines points to the fact that no matter how well defined the computational steps of the procedure are, and despite the attempts of structured programming to separate data from program, an algorithm is folded into its methods, tools, data and users (Lee et al., 2019). Put simply, an algorithm is nothing without its enactment by a whole socio-technical system: there are no algorithms but only algorithmic systems (Seaver, 2017). In other words, the algorithm is a figure or short-hand to describe a complex assemblage. For feminists STS scholars, figures are descriptive tools that helps to unpack complex meaning-making entities, the flesh of practice and significance where the material and the semiotic are tied together (Castaneda, 2002, p.3; Suchman, 2007). Figures are locally defined, they could be multiple, transformed and contested (Haraway, 1997, p.23; Suchman, 2013, p.49).

Depending on the knowledge and interests of actors inside the theatre of transparency, an algorithm can be figured in different ways. In the context of

my study, drawing the boundaries of what algorithms are is an object of contestation especially when actors such as a nursery manager have an agency in figuring them. Delineating the form of an algorithm and how it participates in a given administrative procedure will influence how the Right to Explanation can be used and what accounts we can obtain through this legal device. In other words, the figuring of algorithms matters for the configuration of the transparency theatre.

Using the register of STS scholar Bryan Pfaffenberger, I would then consider algorithms as theatrical entities part of what he calls a “technological drama” (Pfaffenberger, 1992, p.3). In my ethnography, this drama is the growing State algorithmisation and the contested agency of algorithms in taking unfair administrative decisions. The algorithm becomes a theatrical character because it plays a role in this “technological drama”. Pfaffenberger is clear in saying that problematic technologies do have a materiality — the algorithm is not just a metaphor up in the air — but the way they are presented constitute political acts: “The technology is designed not only to perform a material function but also to express and coercively reinforce beliefs about the differential allocation of power, prestige, and wealth in society” (1992, p.283).

Following Pfaffenberger, we can say that the force of algorithms is effective only if they are sustained and legitimised by discourses that impose an authority. This figuring of technology is precisely what creates this “theatrics of authority” theorised by Yaron Ezrahi (1991). In Chapter 4, I will explain how a technological drama emerged because algorithms are taken seriously as authoritative artefacts with distinctive powers. Indeed, algorithms often embody symbolic discourses of ordering, automation and recursion (i.e. Mumford, 1967; Pasquale, 2015; Hui, 2019) that generate a “differential allocation of power” since their agency in participating in the administrative decision-making is acknowledged. In my study, it is more than acknowledged: their “prestige” as efficient policy tools and “power” to take decisions is the heart of the

technological drama. Pfaffenberger considers these figurings of algorithms as ways to “regulate the interpretation” of entities, he then defines technology as a “literary genre” where many actors could shape and transform the meaning of technological artefacts (1992, p.284).

Consequently, in my study, to consider algorithmisation as a figuring activity is to see that the way administrations foreground “algorithms” with their symbolic functions is a performance generating “reciprocal reaction” from citizens (1992, p.285). For example, as the opening anecdote has shown, a nursery manager responds to a regulation by naturally using an algorithmic register to define an allocation mechanism. She performed the algorithm as a figure regardless of the real materiality of the allocation system. In Chapter 4, I will provide several surprising examples where the administrative regulator staged mundane bureaucratic policies as algorithms.

To summarise, administrations are making “statements” about algorithms and citizens could respond with “counterstatements” (Pfaffenberger, 1992, p.285). This political debate is what Pfaffenberger calls a “technological drama” which is also a “polity-building” (Pfaffenberger, *Ibid*). It has recently been reframed by the STS literature as an “algorithmic drama” (Ziewitz, 2015; Seaver, 2017; Jatou, 2019). If I adapt Pfaffenberger’s analysis to my inquiry, I would say that in this theatre, algorithms are *characters* playing many roles and functions.

How to follow and ethnographically describe the figuring of algorithms inside this theatre is the subject of the next part. I will present an ethnographic program designed to make sense of the circulation of accounts about algorithms. Its main strategy consists in observing the observers of algorithms while they attempt to label their practices through an algorithmic language. Each contingent definition of an algorithm will generate a particular way to make it transparent.

### III) A post-digital ethnography of algorithms

If the contemporary imagination often sees algorithms as lines of programming codes in a software stack, what I am encountering in my study is a “designification” of algorithm meaning. This transformation is moderate and inegally distributed in society. As Pfaffenberger warned us: “the drama can drop out of the technology: The connection between technological activities and social meanings seems susceptible to erosion. As unanticipated consequences [...] and social change erode the connection between activity and meaning, designification may occur” (1992, p.308).

If the contemporary imagination is tributary of the modern computer science definition of algorithms, when a nursery manager figures a mechanism operating a childcare market as an algorithm, the concept is evolving. If the pre-modern algorithm (emerging before the seventeenth century) was simply a set of rules/instructions and the modern/contemporary is a digital object, what is the vision of the algorithm to come? What is happening when algorithms become mundane heuristic devices to describe procedural systems? Surprisingly, for Pfaffenberger it is when the meaning of technologies becomes fuzzy that their naturalisation is the most pervasive: “For all the loss of meaning that occurs in designification, however, the artifacts, their contexts, and our social behaviors remain; they become taken for granted, routine, and part of the natural attitude of everyday life” (1992, p.309).

I would argue that the vision of algorithms to come might be to see them as *post-digital* entities used for their explanatory power. What I want to suggest is that there is a performative logic of the digital that is not only material — put in action through computational technologies — but also discursive, to the extent that algorithmic thinking becomes used in many areas of social life and far beyond the study of computational technologies (for a contrasting view

on this see, Berry and Dieter, 2015, p.4). Following media scholar Florian Cramer, I argue that the “digital” is so embedded within society and culture that it loses its specificity and meaning as a concept. This is what Cramer calls the “post-digital” (Cramer, 2015).

To contextualise the “post-digital”, it is important to note that researchers such as a Florian Cramer, David Berry and Michael Dieter identify its enactment primarily in the works of contemporary artists following the trends of “re-materialization”, “vintage media”, “neo-analog”, “post internet” and finally “post-digital” (Bruno, 2014). These artworks were a reaction against a growing popular culture branding the “digital” as something inherently of good quality, accompanying a shiny technological progress and reflected in a consumerism attached to the “high tech”. A “post-digital algorithm” could be for example when an “old” artefact or technology (e.g. the housing tax) is reframed in the language and processes of a so-called “new” technology (the housing tax is becoming an algorithm).

In my study, I do not take “post-digital” artefacts as manifestations of a new artistic formalism but as ethnographic clues figuring technological artefacts in peculiar ways. A post-digital ethnography seeks to unpack the discursive nature of technological activity and how political moves are performed through the transformation and naturalisation of digital concepts and processes. In front of the hegemonic frame of algorithmisation, actors studied in this thesis adapt and resist by bending the concepts of “algorithm” to their needs.

Similar to Cramer, I do not want to indicate that we are experiencing a turn “after” the digital or a massive return to the use of analogue methods and approaches. Cramer indicates that we are more and more seeing the world through the language and processes of digital technologies to the extent that the distinction between digital objects or processes and non-digital ones is blurred (Galloway, 2014; see also, Berry, 2014; Berry and Dieter, 2015, pp.2–3). For him, the



fascination for digital objects is increasingly replaced by a disenchantment of their power — which in my study results in the circulation of the label “algorithm” in everyday administrative contexts. In some instances, this post-digitality could be a way to come back to the pre-modern vision of algorithms as a formal procedure presenting a mechanics of rules or recipe (Ziewitz, 2017; Neyland, 2019), in others, the algorithm points to a socio-technical assemblage (Seaver, 2017). Indeed, as studied in Chapter 5, the housing tax algorithm will appear as an infrastructure. Either way, the algorithm is requalified.

My intuition is that when the algorithm is taken up in everyday bureaucracy it stops being reified as a “magical god” and practitioners invest meaning in it that is useful for their regular missions. As Cramer’s noted: “Post-digital’ thus refers to a state where disruption through digital information technology has already occurred” (Cramer, 2015, p.20). For an actor committed to digital innovation such as Etalab, adopting a post-digital definition of algorithm could be a way to naturalise their use and in doing so, a way to appear innovative as an organisation that is in a stage beyond disruption. Here, the post-digital algorithm is clearly a theatrical character inside a “technological drama” that is a regularization of algorithmisation. But at the level of everyday life, when the post-digital algorithm is perform to make sense of a situation it is more clearly a tactic to cope with the opacity of algorithmisation while paradoxically not engaging directly with its materiality, but with its discursive power, as explained by Berry and Dieter: “As ubiquitous computational infrastructures radiate data, they encourage tacit modes of knowing and the iteration of habit – and thus also create agnōsis, or ‘not knowing’, through a form of agnotology. By ‘agnotology’ we are referring to the way in which computation facilitates a systemic production and maintenance of ignorance. [...] One consequence is a twisting and turning of computational logics into other contexts against attempts to orient and ‘get a grip’ on computational things” (2015, p.5).

What Florian Cramer and others identified in niche and arty media practices, should be contextualised in a much broader history of thinking about society and culture in information and computational terms. Indeed, the fact that machinic metaphors help to redefine processes of industrialisation, proceduralism, regulation and control has been running for centuries (Giedion, 1948; Mumford, 1967; Beniger, 1989; Agar, 2003; Manovich, 2013; Siskin, 2016).

Both metaphors of algorithms and machines are not grounded in digital culture since the two concepts pre-existed before the digital era. Nevertheless, the analogies linking systems, machines, or algorithms with other entities work in the same way: a mechanical or procedural process is structuring and fluidifying the flow of information. Such metaphors are performative: they add a layer of meaning, potentially help to rationalise actions, brand organisations, and have effects for the way practitioners think of their practices. Put differently, the concept of “algorithm” has been used as a literary device for practical reasoning and reverse-engineering.

During my fieldwork the algorithm was used by actors as a figure to metaphorically qualify administrative actions. Following STS Scholar Malte Ziewitz, a post-digital ethnography of algorithms takes for granted that the concept is more and more used as a figuring device: “What would it take to understand algorithms not as techno-scientific artifacts, but as a figure that is mobilized by both practitioners and analysts? [...] I shall demonstrate how people see and recognize just what is going on around them when they do so through the figure of the algorithm. My goal is therefore not to study algorithms as a term of art in mathematics and computer science, but as a device for making sense of observations. While this approach may seem parochial at first, it allows us to explore a kind of reasoning that has become pervasive not only in the social sciences and humanities, but also in law, design, and public policy” (2017, p.2).

For STS ethnographers and anthropologists, an ethnography of algorithms could already be a post-digital ethnography. This is what anthropologist Nick Seaver (2017) suggests when he is saying that algorithms are not external entities that invade our sanctified culture but socio-technical systems enacted by our everyday culture — meaning by our social collective practices. For Seaver as well as for Cramer, the algorithm is one of these entities that are so embedded in our practices that it does not make sense anymore to reify them as digital objects.

My way to conduct post-digital ethnography is to centre the focus on how the idea of the algorithm is transforming a field (in my case, public administration) in the context where the concept is used to think about certain objects, processes or practices — in my study, administrative procedures. A post-digital ethnography of algorithms is about how algorithmic figuration is influencing practices and how this process is in return shaping local knowledge and reasoning with and about algorithms.

Inspired by Nick Seaver's tactics for an ethnography of algorithms (2017), I propose below four tactics I used during my post-digital ethnography of algorithms. The first tactic is a broad strategy oriented on observing those who observe algorithms. The second tactic that could be understood as a way to advance the first strategy consists in mapping the various ways some entities (such as administrative procedures) are enacted under the realm of algorithmic figuration. The third follows the same process and proposes to draw the relations between the many domains and contexts where algorithms have been enacted. Finally, the last tactic should help to evaluate the overall performative effects of the algorithmic language on local knowledge of actors and everyday administrative situations.

## Observing the observers of algorithms

Observing the observers of algorithms means to follow and analyse the many practices of actors involved in framing and attempting to stabilise an algorithm. A post-digital ethnography is then focused on the way second-order accounts (the circulation of comments about algorithms) orients our modes of observing (Esposito and Stark, 2019).

During my inquiry, I put in practice this strategy of “observing the observers of algorithms” in two ways. Firstly, by following Isidore Baudoyer on inquiries related to different algorithms — including the housing tax, a procedure allocating daycare places in nurseries and a system calculating a “hiring potential” for companies in order to help unemployed citizens in their job research. Secondly, through the organisation of workshops I put citizens in the situation of observing the housing tax through the scrutiny of tax letters. There, I provoked a situation for my inquiry, where I could observe how people observe and make sense of an algorithm at the level of everyday life. Put differently, a post-digital ethnography of algorithms is an “ethnography of thinking with the logic of the digital” sensible to the various ways citizens are able to produce meaningful accounts when algorithmic processes are used for practical reasoning.

Observing the observers of algorithms oriented a strategy of inquiry into studying not exactly how algorithms are present in the field independently of the researcher (first-order of analysis), but more specifically what people think is happening when they try to catch algorithms in the context where a researcher is present along with them (second-order of analysis). Adopting a second-order approach is a way to observe the production of reflexive accounts

on algorithms developed by observers, as well as to reflect on the role of the researcher in contact with this process. In relation to the challenge of algorithmic transparency, it is precisely reflexivity that civil servants necessarily need to have in order to be able to describe and publicise their algorithms.

Now that I have given a general strategy for a post-digital ethnography, I will turn to more practical tactics that I put in practice while I was observing the observers of algorithms. They constitute methods to probe the language of algorithms, its travel through different domains and the effects it has on them.

### **Mapping and provoking algorithmic figurations**

Education, health, fiscality, police: no field of public action is beyond the reach of algorithms. From a simple calculus in an Excel spreadsheet to a whole artificial intelligence infrastructure: algorithms take various forms, visible in different ways. As their definition and materiality are not fixed, knowing algorithms is not obvious and signals an occasion for public actors to reflect on the introduction of these new entities in our everyday administrative life. The first tactic of a post-digital ethnography of algorithm consists in mapping the discursive enactments of algorithms. Here, we must follow an advice of actor-network theory: to let actors define entities and to draw the trajectory between these conflicting and controversial definitions (Latour, 2005, p.22).

Algorithmic transparency is a matter of concern for public bodies as more and more administrative decisions are taken within opaque algorithmic systems. Here transparency appears as an experimental practice of identifying and delineating the boundaries of algorithms. Consequently for actors, transparency was in itself a mapping process. As I will develop in Chapter 5, delineating the role of an algorithm as part of an administrative decision is the difficult job public bodies have to go through if they want to be credible

accountable actors. Using the work of sociologist Fabian Muniesa (2011), I will therefore specify the pursuit of algorithmic transparency in administrative contexts as a “trial in explicitness”: the explanations justifying how an algorithm participates in an administrative decisions calls for a detailed description of the various unanticipated variables, processes, human and non-human actors participating in the administrative procedure.

Making something explicit must be understood both as an act of clarification and unfolding. In my case, these two sides of the explicitness address two different questions: how does an algorithm participate in a situated administrative decision-making? How does each step of the algorithm impact the final administrative decision?

Drawing on Bruno Latour’s “theatre of proof”, for Fabian Muniesa, the underlying theoretical assumption is that a “trial in explicitness” is also a trial in specifying the agency of algorithms, in other words: “...to make something explicit is not about clarifying or implementing something that is already prefigured as a potential reality, but rather about putting that thing to the test of variable, often conflicting and unanticipated forms of actualization” (Muniesa, 2011, p.2).

The process of achieving algorithmic transparency is an attempt to catch what algorithms are doing as part of an administrative procedure. In this performative and experimental work, the stabilisation of the entity “algorithm” is contingent and may shift. Mapping the various enactments of algorithms is not obvious because there is a tension between the “trial of explicitness” as a process making already existing entities clearer or as a creative, performative, transformative act provoking a surprising reality (Latour, 1999, pp.113–144; Muniesa, 2011, p.2). In other words: is the mapping process accompanying transparency simply a work of simplifying an existing algorithm to make it finally intelligible, or does transparency also “generate” algorithms?

During my study, the epistemological and ontological conceptions of algorithms changed: their definitions and materiality are not fixed *a priori*, and different attempts to make them transparent performatively created different visions of their agencies. Here, we can say that transparency is performative: what is made “open” or “transparent” does not *pre-exist* but is *made* “real” in a *re-presentation*. This making is the work of performativity understood as a provocation of reality (Muniesa and Linhardt, 2009; Muniesa, 2014). This ontological effect of performativity is distinct from the performativity understood as the theatricalisation of action — even though these two distinctions often collide. Following anthropologist Nick Seaver, an ethnography of algorithms must take for granted the “terminological anxiety” we face and move on to consider these objects in the prolific various ways encountered in the field (Seaver, 2017, p.2).

While in Chapter 4 we will see that public actors understand algorithms as source-codes, they are rapidly reformulated by regulators in a way that almost conflates them with any administrative procedures. In this sense, the definition used by the regulator CADA is post-digital. On another side, some commentators of the algorithmic controversies positioned algorithms as a simple manifestation of codified public policies, laws or regulations.

Then, in Chapter 5, the housing tax “algorithm” will be envisioned as an automated calculus inseparable from the State fiscal infrastructure. Here, figuring the housing tax as an “algorithm” helps to make sense of an assemblage. It is also in Chapter 5 that the definition of the housing tax as an algorithm will be debated by actors: if transparency needs to be practiced, its object must first be clarified. But the direction of this “trial in explicitness” is a strategic site for actors: different realities of algorithms could be made visible while others could be kept out of sight. To summarise: the ontology of an algorithm has consequences for the capacities of actors to make it “transparent”.

The next section presents another tactic: after the mapping exercise comes the drawing task consisting of making sense of the many domains and contexts where the housing tax was staged.

### **Drawing relations across algorithmic domains**

Tracking the different enactment of the housing tax is complex because this entity is crossing different domains: how can it be at the same time an algorithmic technology, a bureaucratic tool, a fiscal device and an everyday administrative duty? To face such complexity, anthropologist Marilyn Strathern proposed that: “the [ethnographic] device is that of crossing contexts. [...]it tracks people's activities and narratives as *they* cross domains, and thereby unpacks the heterogeneous social worlds people pile up for themselves. If worlds are stacked inside one another, their compatibility may or may not be an issue” (2002, p.309).

This mixing of domains between an administrative procedure (the housing tax), objects (the tax letter), people (tenants), technological forms of calculus (the algorithm), institutions and locations (municipalities, the French State) is the complexity creating opacity and generating the claim of transparency. And it is clear that there is no point of view, no utopian situation or context through which all these crossing domains can be made fully accountable. As Strathern noted: “ethnographers cannot possibly englobe data within a single context, make it all compatible” (2002, p.310). And the point is not to make it compatible but to map the relations between the crossed domains in order to unpack how the algorithms are differently understood and experienced. To perform this drawing exercise without searching for the ideal context where the algorithm finally sits, Strathern suggests that: “[ethnographers] must instead be explicit about their own preconditions of context production, whether they think of themselves as crossing domains or



recovering the dimensions of decontextualization. We come to another device. The little social engine that makes either route possible is relations. By this I refer doubly to the conceptual relations that link data and to the living relations people have with one another” (Strathern, 2002, p.310).

In Chapter 4 and 5, the post-digital ethnography of algorithms is focused on “crossing domains” where the algorithm is travelling: once an entity belonging to the realm of science and technology, when the housing tax algorithm enters administration it becomes a bureaucratic tool, when the citizen interacts with it, it is seen as an everyday administrative encounter with the State, and finally when a citizen reclaim algorithmic transparency to the regulator or court it is then transformed as a legal entity. Between Etalab, the DGFIP and the regulator CADA, clashes and alignments between these different versions of the housing tax will arise during negotiations leading towards algorithmic transparency and accountability. Drawing the relations between these clashes and alignments will be key to delineate how the housing tax algorithm is stabilised in order to be made transparent.

Now that the algorithmic language is mapped across many domains, the post-digital ethnographer could envision what the effects of this language on the studied situations are .

### **Analysing the effects of algorithmic figurations**

As we have seen in the description of the first tactic, calls for transparency create “trials in explicitness” that would eventually stabilise the entity algorithm. Indeed, it seems like the irruption of the entity “algorithm” in the administrative context under study is a figure used to define the calculus responsible for an administrative decision. As I will develop in Chapter 5, stabilising a definition of the housing tax as an algorithm will be a battlefield in itself. Depending on how this definition is framed, transparency will not be

applicable the same way. Following sociologist Fabian Muniesa and his study of the algorithmisation of finance, I find it interesting to see what the “algorithm” figure is doing in my administrative context: "The central question then became [...] what this register of information made it possible to subjugate: that is, to fix, to subject to the rule" (Muniesa, 2019, pp.201–202).

Muniesa is wondering how the languages of information, algorithms and rules are transforming a particular field. If, as we will see in Chapter 4, administrative procedures are seen as “algorithms” the question remains whether this surplus of algorithmic figuration is clarifying the procedure or adding confusion, whether it rigidifies actions or gives more agency to public servants, and finally, whether it might also naturalise the use of algorithms in missions of public service. Investigating and answering to all of these important interrogations goes beyond the scope of this thesis.

My aim is more strictly to ask what the “algorithm” figure is reconfiguring in the context where calls for the transparency of administrative decisions are made. The question remains open whether the “algorithm” is naturalising State algorithmisation, if it fosters the depersonalisation of political actors and if it instantiates the belief that involuntary and amoral actions are taking place backstage. To answer this question, my method consists in tracking the effects of the algorithm language and its consequences. In doing so, my thesis is situated in a lineage of STS studies focused on the rise of machinic metaphors in domains that seemed, at first, not yet completely subjugated by the realm of information and algorithms (i.e. Mirowski, 2002; Muniesa, 2003; Neyland, 2019).

## Conclusion

This chapter has presented the context and design of my inquiry in and around Etalab. I negotiated my entry at Etalab through the writing of a “convention of cooperation” which gave me a certain agency to endorse the roles of ethnographer, designer and freelance consultant. I argued that it is the shifting between my roles that allowed me to obtain a legitimacy to act and access to key sites of ethnographic observations. The friction between my roles and the different other types of expertises encountered in the field showed the limits of how I could intervene and collaborate with other practitioners.

To present my ethnography, I used two sets of methodological devices: I use a theatrical vocabulary to unpack transparency performativity and ethnographic tactics to depict of algorithms across the fieldwork. With the aid of these methodological devices, I develop the argument that “transparency” and “algorithm” must not be understood as as a simple “effect” and “digital object”, but should both be understood as the concatenation of *situational, socio-technical and figuring practices*. I consider transparency as a performative act of disclosing information using rhetoric, ways of staging visible actions in everyday situations and a particular temporality sequencing the moments when information will be made public. I adopt a performative stance to unpack transparency’s situational practices and paradoxical effects rather than a verifiability-evaluative approach, which more concerned with its intended outcomes. However, being sensible to the evaluative efforts of actors is a precondition of a collaborative ethnography.

Since algorithms could not be defined anymore as stable scientific and technical artefacts, the practical figuration used by actors to define these entities across different domains must be the central focus of an empirical study of algorithms. This is particularly true for my study because algorithmic transparency is operated through ontological definition of algorithms given by

legal regulations (e.g. for the GDPR what matters is a “fully automated decision-making” and not an “algorithm” *per se*).

The third and last part presented how I empirically conducted an ethnography of algorithms using a post-digital approach inspired by recent theorisation of media art practices (Cramer, 2015). Since algorithms are so embedded in everyday life and are rhetorically used as analogies for other entities, I proposed a general strategy and three specific tactics to catch their different meanings. The core strategy is of “observing the observers of algorithms” and not only to follow them but to intercept the algorithmic figurations they used (first tactic) across heterogeneous domains (second tactic) in order to evaluate their effects on the conduct of actions inside administrative procedures (third tactic). While my proposal of experimenting a post-digital ethnography is particularly focused on the circulation of algorithmic figures, it is aligned with anthropological and STS ethnographies of algorithms (Muniesa, 2011; Neyland, 2015; Seaver, 2017; Ziewitz, 2017).

## Chapter 4: Activating the Theatre

### Transparency as a Performative Transformation

#### Introduction

This chapter offers an analysis of the performativity of FOIA requests and the emergence, in France, of the contested figure of the algorithm. Here, performativity is understood in the sense that calls for algorithmic transparency are transformative: they reorganise the agenda and missions of actors. The chapter discusses how political concerns about algorithms emerged as a problem of administrative transparency, creating a need to publicise administrative systems. To make this clear, I will present and discuss a series of contestations emerging between 2014 and 2018 which configured algorithmic transparency as a public issue grounded in administrative contexts. The description and analysis of these events will also further introduce the context of my inquiry and foreground the key actors we will encounter in further chapters.

Through the analysis of contestations around the lack of algorithmic transparency, this chapter responds to three core questions of this thesis: how is transparency performed? How does transparency affect the environment where it is performed? Which entities and techniques of the “transparency theatre” are activated through transparency performances? Consequently, this chapter aims to show that transparency is not simply a moral ideal but a practice that is performed. Transparency performances are transformative and are ordered by theatrical ways of making things public. Indeed, transparency requires the staging of identities, conflicts and objects.

Confronted with the growing controversies against unfair decision-making based on algorithms (part I), Etalab took the Open Government Partnership (OGP) as an opportunity to create a national plan of action aiming at enhancing algorithmic transparency (Part II). Meanwhile, the Ministry of Digital Affairs institutionalised a powerful transparency device: the Right to Explanation of algorithmic decision-making, an instrument institutionalised through an FOIA mechanism (part III). In order to participate in the initiative of the Right to Explanation towards more transparency, Etalab self-designated as a proactive actor helping in its creation and application. If some controversies regarding administrative transparency emerged naturally, it was only through Etalab's proactivity in helping to create this right that the "algorithm" became the central object of transparency. The Right to Explanation has then been used for the first time by Victor d'Aiglemont, a journalist targeting the French housing tax algorithm, the object of transparency discussed in further chapters (part IV).

Along the analysis of disputes, I will delineate three different modes through which transparency was claimed and performed: the *self-presentation* of citizens through which their identities were staged in order to appear in need of more transparency; the *controversial* climate nurtured by news media imposing the "algorithm" as a contested technology; and the *provocation* of reality leading to the coming into being of "algorithms" as objects of transparency.

In other words, this "activation" of performative modes implies the *mise en scène* of status, disputes and technological entities. The disputes about unfair administrative decision-making push for this activation: a response from administrations is needed and it requires staged performances. The activation of the transparency theatre and its associated performances is also what started and speeded up the emergence of "algorithms" as contested entities participating in problematic administrative actions. The performative modes are a reaction to the disputes that formally institute the topic of algorithmic

transparency and generate its performances. This formal institution of a controversial topic is made thanks to the theatrics of transparency.

Indeed, the performative modes are theatrical first because they imply a form of make-believe — what I refer to as “staging” — and secondly because they have unexpected transformative effects. My hypothesis is that transparency does more than simply pushing actors to perform, it is also *transforming* the entities through which the performativity is lived. While an evaluative mode of studying transparency will consider it as a *re*-presentation, my commitment to a performative approach will unveil it as a transformation: a particular configuration enacted through actions with reorganising effects. These transformations have consequences for the way transparency will be practiced in further chapters.

Many theatrical entities and techniques are *activated* through the narrated events to sustain actors' performances. The description of each performative mode and its effects on the activation of the theatre of transparency follows a chronological order belonging to the succession of disputes. Firstly, disputes activated what I addressed and defined as the *dramaturgy of transparency*: claims and demands for more transparent administrative decisions performed in a dramatic register. Secondly, in this controversial context, Etalab became the *stagehand* capable of helping administrations to face citizen demands. Thirdly, Etalab and the Ministry of Digital Affairs positioned the Right to Explanation as the main *device* of the transparency theatre: the legal instrument promising to achieve accountability. Fourthly, this Right is used by a journalist who then becomes the main theatrical *witness*.

The chapter starts with two cases, one regarding the income tax, the other regarding the allocation of students in universities. Using a particular discourse — what I call a *dramaturgy of transparency* — they put in circulation

the belief that administrative transparency needed to be improved through more algorithmic transparency.

## I) Activating the dramaturgy

### The income tax source code litigation

A dispute about the income tax source code took place during the spring of 2014, when Etalab's intern César Birotteau was struggling with the development of *Open Fisca*, a free software package that simulates the French tax system. Rather than undertaking the difficult task of recoding the entire income legislation into a new computer code, this graduate student at the Paris School of Economics thought he could simply ask the Ministry of Public Finance for the source code of the income tax calculator. As he remembered: "As a great believer in the principle of least effort, I said to myself that it was rather absurd to completely recode tax legislation when this code already existed: our taxes have to be calculated somewhere! While I was looking around, I found someone who seemed to be able to help me at the General Directorate of Public Finance [DGFIP] - they are the ones who calculate our taxes. What a surprise when I found out that this person was on the floor above mine at Bercy [where the DGFIP is situated], I even thought for a moment that I could get the source code within a week and finish coding all the tax niches before the end of the internship!".

But Birotteau encountered many obstacles along his journey. He first addressed an email to a DGFIP manager, but, when left without a response, he climbed the stairs and visited the fiscal officer in person. Their discussion ended on the fact that the request should be referred to a supervisor common to their



respective administrations<sup>15</sup>. Facing this failure, on the 24<sup>th</sup> of November 2014, César Birotteau sent a formal request to the Commission of Access to Administrative Decision (CADA), the regulator in charge of administrative transparency. This commission composed of ten members — a mix of MPs, senators, magistrates, mayors and State archivists — is in place to disclose administrative documents and arm citizens with evidence before they could contest administrative decisions in front of a court.

Less than two months after the CADA received Birotteau's request<sup>16</sup>, the regulator gave him a positive response and enjoined the DGFIP to disclose the source code of the tax income calculator. The CADA justified its positive response by specifying that a source code could be communicated to a citizen just like any other administrative document. Unfortunately, under the french FOI legislation, CADA cannot force an administration to disclose or give sanctions if this one does not follow its advice. Since the regulator did not have the same legal authority as a court did, it could not force the DGFIP to give a response to Birotteau. Hence, for over a year, the DGFIP stayed silent on the legal request sent by the Etalab intern.

On the 30<sup>th</sup> of May 2015, César Birotteau decided to go a step further to claim his right and sent a request directly to the Administrative Court of Paris. Birotteau argued his request to the tribunal using the classical law institutionalising FOIA in France. More precisely, he suggested that: "The Bill n°78-753 of 17 July 1978 recognises the right of any person to obtain communication of documents held by an administration in the context of its public service mission, whatever their form or medium."<sup>17</sup>

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15 - Indeed, he found out months later that the decision to disclose the code has finally been decided by Michel Sapin, the Minister of Finance at the time.

16 - See the FOIA request at: <https://cada.data.gouv.fr/20144578/>

17 - Extract from the letter of defence with the following object: "submission of a request for communication of the software that calculates income tax by the General Directorate of Public Finance."

Following prolonged discussions between César Birotteau, the DGFIP, and the Court at the end of 2015, the source code of the income tax calculator was finally made public in April 2016 (Berne, 2016b). More importantly, when responding to Birotteau, the Administrative Court of Paris confirmed what the CADA already proposed: that a source code could be identified as any other administrative document (Berne, 2016a). As we will shortly see, this decision is very important because it became a first element that fed the need for more concrete legislation realised later with the creation of the Right to Explanation of algorithmic decision-making (part III).

The fact that Birotteau was obliged to submit a request to the CADA and then to an administrative court indicates that citizens must be proactive in order to obtain responses from administrations. It requires efforts and the process of disclosure was slow in this case. Moreover, their active involvement forces citizens to demonstrate their motivations and perform their identities. Inside the theatre of transparency, *members of the audience are performers too* (Goffman, 1959; Hilgartner, 2011).

We will see that as a performer, Birotteau staged his professional identities. The three requests sent to the DGFIP, the CADA and the Administrative Court were sent under Birotteau's individual name, in his capacity as a citizen, but the context of his work at Etalab was clearly stated, as well as his status as a student-intern. These overlapping identities created an ambiguity on who was the actual request sender: Birotteau or Etalab? Etalab through its intern? This ambiguity is indicative of a first mode of performing that I observed in practices of transparency: *self-presentation*.

While his demand sent to the Administrative Court of Paris Birotteau stated that the income tax source code could help accelerate the development of *Open Fisca*, later, in the letter written in response to the DGFIP statement of defence, the context of his work at Etalab was no longer mentioned. In this later

document, the initially stated motivation to speed up his programming work is replaced by a broad academic purpose, as Birotteau wrote in the letter: "Refusing access to a source code that reveals the formulas for calculating income tax is all the more incorrect since the purpose of this access is academic research, and since two articles of the Declaration of the Rights of Man and of the Citizen go in the direction of the transparency of administrations, particularly in fiscal matters: Article XIV ("Each citizen has the right to ascertain, by himself or through his representatives, the need for a public tax, to consent to it freely, to know the uses to which it is put, and of determining the proportion, basis, collection, and duration.") and Article XV ("The society has the right of requesting an account from any public agent of its administration.")".<sup>18</sup>

As we have just seen, Birotteau's appearance changed over time, he presented himself in different ways and shared different motivations in order to argue his request. The theatre of transparency necessitates this *staging of the social*, algorithmic accountability could not simply be achieved through impersonal requests. While his request first emerged from a collective effort at Etalab to develop an innovative tax simulator, the legal contestation then appeared more individualised on his status as a graduate student in economics. In short, Birotteau performed many different roles: a programmer willing to work more efficiently, a young economist searching for tax models, a citizen claiming for a right to transparency. I argue that this switching of *theatrical roles* is necessary for transparency to occur: it is the way it must be rightly practiced since each *performed character* provides a different justification to obtain a disclosure. Being a programmer and an economist justified having more resources disclosed to increase the efficiency of his work, and being a citizen justified the disclosure because through this status he deserves to know how taxes are calculated and used. Birotteau is not a dark trickster playing with his professional identity, but he simply knows how to use his *appearance as a political force* to stabilise the need of a veritable transparency.

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<sup>18</sup> - *Ibid*

Regarding the emerging issue of algorithmic management in public bodies, Birotteau's advocacy for the disclosure of administrative source codes *activated the dramaturgy of transparency* in a very peculiar way: he believed in transparency and openness because he hoped to reuse the source codes of administrations for his own agenda, which in this case, was the development of a fiscal simulator. But the reference to Birotteau's personal academic research in his commentary of the DGFIP's statement of defence is blurring his initial motivations since with the mention of his studies, his request appears as driven by a scientific purpose. During my encounters with Birotteau between January and March 2018<sup>19</sup>, he acknowledged that his internship at Etalab was not related to his research as an economist. Nevertheless, it is true that this openness of the source-code could be useful for other economists. Here his request appears as a disinterested move to act for the benefits of others.

Moreover, while he does not seem to be interested in the public justification of how taxes are calculated for citizens, Birotteau's invocation of the Declaration of the Rights of Man is a powerful move to remind the DGFIP of the duty of public bodies towards accountability. This invocation is demonstrative and serves a theatrical function oriented towards persuasion. We therefore see a multiplicity of purpose that motivates Birotteau: developing the efficiency of an innovative tool, providing new data for economists and reducing the asymmetry of information between administrations and citizens. In other words, the *dramaturgy of transparency* sustains the credibility of the *self-presentation* by providing a bundle of legitimate motivations to push for disclosure that fits an adequate context of justification. Put differently, inside the theatre of transparency, performances are configured through the staging of social identities coupled with dramatic discourses.

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19 - I met him when he was actively involved in a civic tech lab at the French National Assembly: the *Bureau Ouvert* (Open Office) where I spent three months during the early phase of the fieldwork (Jan-March, 2018).

This staging mechanism is an example helping me to respond to the core question of this thesis: how do we understand transparency if we see it as a performance? According to Birotteau's story, *transparency is practiced through a self-presentation of citizens, the management of social roles, argumentative positions and professional status ordering how somebody could appear as a credible and legitimate witness in need of transparency*. I argue that this mode of performing is necessary for transparency to be accomplished and Birotteau's *self-presentation* was not necessarily intentionally driven by a strategy, but by a multiplicity of motivations. Playing roles is something naturalised especially since moral behaviours are theatricalised as socially visible and since transparency claims are publicly expressed (Ezrahi, 1995, p.302).

In positioning *self-presentation* as a performative mode of claiming transparency, what I aim to foreground is the *dramaturgical staging of the social* taking place in the transparency theatre: roles and status are used as rhetorical devices to foreground a need (of a source code, for example) or a lack of accountability. Put differently, citizen identities are discursive tools serving a *dispositif* of make-believe. While the duplicity of political representatives is often criticised, here I showed that citizens are performers like any other (Goffman, 1959. Hilgartner, 2011, p.192). Their stagings are necessary for transparency to be practiced.

In the theatre of transparency, administrations and citizens are then in a relation of “mutual accountability”, a dual mode of responsibility where administrations provide accounts and where citizens are responsible for the labour of judging administrations (Garfinkel, 1967, p.33 for a discussion see; Woolgar and Neyland, 2013, pp.31–32). This labour involves a *mise en scène* of identities. I argue that this theatrical style of demands requires the citizens' *ability* to provide credible *accounts* of their motivations — a theatrical *accountability*.

In doing so, organizational accountability ceases to be fully asymmetric and becomes increasingly mutual, first because citizens obtain accounts from organisations, but also because they have to successfully demonstrate their identities and motivations. My claim is that formalised methods of accountability such as FOIA requests are dependent on citizens' stagings mediated through mundane media like letters. The identities of citizens can then be divided among different bureaucratic formats of communication: letters of requests, response to judges, etc. The *self-presentation* is a strategic interaction performed through the concatenation of different identities distributed at different places and moments of the negotiation of transparency: this social dramaturgy has a temporality.

Now that I described the performative style at the heart of Birotteau's demand, what have been the consequences of his performances? This first contestation had the effect of pushing regulators and legislators to specify the abstract entity "algorithm". As the president of the CADA Marc Dandelot explained four years later in a commentary about Birotteau's request: "the CADA had no difficulty in recognizing an algorithm as an administrative document before the legislator came to enshrine it" (Dandelot, 2018, p.129). The CADA's president referred to the decision his commission gave before Birotteau sent a request to the Administrative Court of Paris: for CADA, the source code of an algorithm could be considered as an administrative document. Moreover, Birotteau's victory pushed legislators to act and create what will become the Right to Explanation of algorithmic decision-making, as Birotteau remembered in a blogpost reflecting on his experience: "This story about the tax income source code was beginning to make headlines when Axelle Lemaire [Minister of Digital Affairs] presented a bill on the digital to the National Assembly. An amendment that reaffirmed the right to access source codes of the administrations [...] was adopted at the end of January[2016]."

It is interesting to note that between 2014 and 2016, the struggle was centred on state source codes and not yet on “algorithms” *per se*. Despite this terminological issue, César Birotteau’s request would be later reframed and re-addressed as an algorithmic transparency issue — as Dandelot’s comment can testify. Before I turn to the second dispute, one that more certainly had the consequences of activating the *dramaturgy of transparency* and the algorithmic language, I summarised in a table below the first mode of performing encountered in this chapter, as well as its effects in configuring the transparency theatre. Once the theatre is activated, performances of transparency are configured according to the *self-presentation* mode.

Mode of performing	Entities through which the performativity is applied	Devices of Performativity	Activation of theatrical entities or techniques	Transformative effects
Self-presentation	Citizen  Ex: César Birotteau.	Persuasion using transparency discourses, motivations, justifications.  Professional status and social roles giving credibility and legitimacy.	Dramaturgy of transparency used to be validated as a legitimate witness.	A State calculator is staged as a “source code”, disclosed as an “administrative document” and later reframed as an “algorithm”.

*Table 1: The transformative effects of self-presentation.*

To conclude the discussion of this first empirical moment, it could be argued that Birotteau’s story was the first contestation about an administrative algorithm. The income tax calculator was the first disclosed source code of a French administration. This grant special significance to Birotteau’s request and how it activated key elements of the *transparency theatre*: a citizen presents himself using different roles and motivations for transparency (a *dramaturgy*); the entity “algorithm” starts to emerge and is portrayed as a “source code”; and

the public issue of “algorithmic transparency” surfaced through a pro-active intervention initiated by an Etalab intern. The *transparency theatre* was activated insofar as Birotteau’s contestation configured a first stage where citizens could demand transparency from State calculators. This claim was theatrical because it involved the staging of identities and the dualism of transparency: while the income tax is made visible and accessible through its source code, many of its dimensions are invisible especially for non-developers. This oscillation of (in)visibility is at the heart of the transparency dialectic: a cut or a division between revelation and obfuscation.

The focus on administrative and bureaucratic transparency of Birotteau’s contestation is crucial to understanding how the issue of algorithmic transparency emerged in French regulatory contexts. In this country, contrary to the way the debate has been framed in the Anglo-Saxon world, public controversy was not primarily centred on algorithmic bias (i.e. Bozdag, 2013), different types of discriminations (i.e. Noble, 2018), or privacy and personal data harvesting (i.e. Crawford and Schultz, 2014). Of course, years after Birotteau’s action, the issue evolved and questions of administrative transparency may eventually be framed as social justice issues (i.e. Eubanks, 2018; Dencik and Kaun, 2020) or privacy issues — especially since the GDPR entered into force in May 2018. But it was first and foremost administrative.

I now turn to the analysis of a second moment one that generated a more intensive call for transparency and the emergence of “algorithms” as contested technologies. If César Birotteau’s request activated an issue regarding source codes, a new controversy about a procedure allocating high school students into universities had crucial effects for the *activation of the transparency theatre*.



## The APB Controversy

In a context of growing awareness regarding algorithms, the story known as the “APB controversy” (for *Admission Post-Bac*) became a major topic provoking dozens of new media headlines (Combe et al., 2018) as well as debates at the Senate and National Assembly (Villani and Longuet, 2018). Two student unions took legal actions at administrative courts against the use of this system by universities<sup>20</sup>. The APB controversy is perhaps the major force *activating the dramaturgy of transparency*. The topic was not focused on a technical fiscal topic (such as Birotteau’s income tax source code) but on a large-scale algorithmic system giving access every year to more than 10 000 curricula to 850 000 high school students (Guillaud, 2017). If you are an 18-year-old teenager and want to continue your studies, there is no chance you can by-pass or use another system than APB since almost all degrees are only accessible through this system. Even if the APB has been transformed and replaced by another system in January 2018 (it is now called *Parcoursup*), the controversy is still alive and stirring debates highlighting that the need for algorithmic transparency was and is still pressing.

In this section, I am going to unpack the beginning of the controversy in order to delineate its role in *activating the dramaturgy of transparency* and in *staging the “algorithm”* as a problematic technology. Through the APB controversy, the theatre of transparency is activated because the figure of the “algorithm” becomes a *theatrical character* labelled in many ways, each with different staging effects. Once the role of this system in ordering unfair allocation of students has been attested, calls for understanding its way of functioning generated the *dramaturgy of transparency*. As I will shortly explain, if the need for more transparent algorithms emerged with the APB controversy,

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20 - *Droits des Lycéens* and *Union Nationale des Etudiants de France*. For a summary on this litigation see the press release from the *Conseil Constitutionnel*: <https://www.conseil-constitutionnel.fr/actualites/communiquede/decision-n-2020-834-qpc-du-3-avril-2020-communique-de-presse>

it is because civil society and news media clearly identified effects of the algorithm participating in an unfair student allocation.

How then has this allocation system emerged? In a large news media coverage, the ABP procedure has been alternatively labelled as a “math formula” (Prudent, 2016), “system” (Piquemal, 2016), “software to access faculties” (Snesupparis1sorbonne, 2018), “platform” (Wikipedia, 2010), “website” (*Ibid*), “centralised procedure” (Guillaud, 2017), and as an “algorithm” (Brouze, 2016). If each of these entities corresponds to different information materialities of the system (Dourish, 2016), the label “algorithm” became more popular in the media (Combe et al. 2018). More importantly, through the APB controversy, the “algorithm” is the entity the legislator decided to choose in order to cope with unfair administrative decision-making.

This concept of “algorithm” gained prominence because an algorithm could very easily be used to qualify APB. As shown by computer scientist Claire Mathieu in the official documentation of the system (Vidal, 2018), the APB system as well as its new version *Parcoursup* is in fact composed of two algorithms. The first ranks students based on several criteria (i.e. grades, scholarships), the second matches their wishes with available places within a given training. From a computer science point of view, APB is clearly an algorithm, but the system remained a moving target. In theatrical terms, it is a *character* that has many “fabricated roles” (Pfaffenberger, 1992, p.286). One is to achieve the material function of operating the allocation of students, another is to appear as a contested figure participating in an unfair administrative procedure.

Why then was the system contested? Let me mention the two main features of the APB algorithm that were invoked in calls for more transparency

and generating its dramaturgy<sup>21</sup>. The contestation from citizens was focused on the following issue: some students were randomly selected to start their degrees and bachelors. It is important to mention that “only” between 3000 and 6000 students out of 850 000 were affected by this unfair random sorting (Villani and Longuet, 2018, p.3). Students contested that their grades were not taken in account and that a system could just randomly choose them. Even if this randomised sorting was attributed to the “algorithm”, the object of contestation and its labellings were constantly changing. For example, when observers of the system wanted to go a step further in the contestation of APB, they needed to see the algorithm as an instantiation of a set of public policies, legislation and non-formalised doctrines. Here is journalist Hubert Guillaud’s summary, presented in an article narrating a conference organised by Etalab more than a year after the beginning of the controversy: “The random sorting, so decried, is not due to APB, but to regulation’ says APB’s father [Bernard Keohret, Professor Emeritus at Toulouse Polytechnic School]. It is necessary to understand that if 1000 candidates of the Academy put as first wish a training where there are only 250 places, few other solutions are offered by the system. However, points out Bernard Keohret very rightly, the problem is not so much APB but the lack of space [for students in universities] or the too strong demand for certain degrees. The random sorting is a choice of society [contradictory with French meritocracy] that goes beyond the project manager in charge of the system [universities]. “Someone who has a very good grade and who is refused somewhere because of the randomised selection, that does indeed pose a problem”. Finally, the criteria of priorities used [by the algorithm] are only technical translations of political choices made upstream, such as the random sorting so decried for APB” (Guillaud, 2017).

Who can be blamed? The algorithm or the public policy? Or both? The question remained unresolved, and the object of contestation became a

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21 - For brevity’s sake, I voluntary leave aside a technical issue: the non consideration of wishes’ order in the ranking.

tentacular figure. Here we see that inside an algorithmic “drama” (Pfaffenberger, 1992. Ziewitz, 2017), resisting the regularisation and the agential power of an algorithm means that critics need to frame it in different ways. This process points to “the discursive nature of resistance to technological domination” (Pfaffenberger, 1992, p.285). When the algorithm then becomes a *theatrical character*, citizens and critics can operate a redressive “counter-signification” of the contested technology, as Pfaffenberger notes: “In substituting one discourse for another, countersignification amounts to a substituted metalanguage that undermines the moral authority of an artifact and establishes the superior morality of those who are adversely signified in material meanings. Countersignification gives people a way to live within the system without suffering unhealthy losses of self-esteem. In this sense, it is a form of accommodation to regularization” (1992, p.301). Reframing an administrative “algorithm” as a “public policy” or “regulation” is a crucial discursive counter-narrative or “metalanguage” for criticising the system, but it does not necessarily destroy it: the implementation of “algorithms” as policy tool might continue.

After the problem of random allocation of students and the reframing of the ABP algorithm as a public policy, the citizen contestation has been more focused on a problem of geographical segregation. “While apparently APB has expanded the choice of trainings nationwide and offers free choices, in reality, APB has reinforced the “academic barrier”” said geographer Leila Frouillou”, who investigated the system after having finished her thesis on social segregation in the *Île-de-France* department (Frouillou, 2015 cited by ; Guillaud, 2017). What the geographer means is that APB has reinforced the recruitment of students in their own regional academy. For example, Parisian universities no longer recruited beyond Paris. The problem, the geographer points out, is that the strengthening of the academic barrier generated misunderstandings and frustration. Reinforcing social segregation also means limiting social diversity.

If it is clear that the random sorting and the mechanism of social segregation could fairly be attributed to the algorithm (as an instantiation of a public policy), other important criticisms pointed to other components of the allocation procedure. For example, the lack of information on how the system is working and the lack of advice given to students and parents were caused by the algorithm but by a lack of concern for such topics from the Ministry of Higher Education and different Universities. The various “bugs” experienced by students were also often provoked by technical defaults in the web infrastructure of the system and were not linked to the sorting and matching mechanism (de Tarlé, 2013). In short: while the “algorithm” entity emerged during this controversy it was not always the only point of criticism. But framing the system as an “algorithm” helped news media critics to bluntly state their commentaries. They used this negative and threatening language of an “algorithm” understood as a “black box” (L’Etudiant, 2016; Piquemal, 2016; Marissal, 2017; Haegel, 2017) that could destroy the French educational system: the random sorting and the academic barrier were understood as elements limiting the French cardinal virtue of meritocracy.

For a *transparency theatre* to emerge, the publicity of transparency needs to be intensive, and this controversial climate coming from the APB controversy constitutes the second mode of performing that helped to configure the theatre, controversial topics generate demands for more accountability. In democracy, for the political agency of technological nonhumans to be acknowledged they first need to be publicised through the civic eye of news media (Marres, 2010) operating in a dramaturgical climate of *controversy* (see Table 2 below).

Mode of performing	Entities through which the performativity is applied	Devices of Performativity	Activation of theatrical entities or techniques	Transformative effects
Controversy	Newsmedia, public policy reports	An administrative procedure portrayed as an unfair “algorithm”	Dramaturgy of transparency  The “algorithm” is a theatrical character with multiple figures.	“Algorithms” emerged as administrative objects to be made transparent

Table 2: The transformative effects of controversies.

Regarding the *activation of actors and roles in the theatre*, Etalab has been pro-active in discussing the APB controversy. As I mentioned earlier, Etalab, together with the *Fondation Internet Nouvelle Génération* (FING) think tank, organised a conference in 2017, where many APB stakeholders and critics presented their views on the topic. This event was the occasion for the two organisations to present their respective reports and recommendations to improve the transparency of the system (Guillaud, 2017). FING was particularly pro-active in framing APB not as an “algorithm” but more generally as a “system” (Guillaud and Marcou, 2017). Again, the “algorithm” was used as a *theatrical character* with many figures, a useful short-hand synthesizing a bundle of concerns: from random sorting to the enhancement of social segregation, from the agential power of computational technologies to the long-standing black-boxing of bureaucracy.

Portrayed this way, APB was fabricated as an entity with protected borders and controversial qualities. This is how this empirical moment surfaced during my ethnography. Indeed, as the controversy was also very heated in public policy circles, Etalab strategic counsellor Baudoyer warned me early on that I should not investigate APB. In February 2018, as the controversy was still very prominent in the media due to the legal actions of student unions, the Minister of Higher Education decided to create an ethical and scientific

committee of which Laure Lucchesi, head of Etalab was a member. Several times, Isidore Baudoyer, represented Lucchesi (his direct supervisor) at this ethical committee. I think he did not want me to ask too many questions about what was discussed in those meeting. Once, when we went for lunch with lawyers from the data regulator CNIL (*Commission Nationale Informatique et Libertés*), Baudoyer was uncomfortable with my presence and asked me not to take notes. Since nothing controversial emerged during this meeting, I did not really understand why he asked to be discrete, but, for sure, the APB controversy provoked intense anxiety. As already suggested by anthropologists Harry G. West and Todd Sanders (2003), ethnographies of transparency are also always ethnographies of suspicion and controversy — two sentiments infusing *the dramatic atmosphere of the transparency theatre*.

Controversy brings drama and colours the performative style through which transparency is claimed. Indeed, if Birotteau's *dramaturgical strategy* was to claim for more transparency in the hope that a disclosure will help him accelerate his programming work, his demand was not to cope with an unfair decision making. It is more certainly the APB controversy that put in circulation the idea that an "algorithm" is the cause of the unfair decision-making, and in this last case, transparency appeared more important than in Birotteau's case. While in the first case, transparency was understood as the dry opening of a code, in the second it was seen as a powerful mechanism to achieve accountability and a way to enhance the intelligibility of a procedure.

Put differently, in this early phase of theatre configuration, the *dramaturgy of transparency* has been activated through the mobilisation of two justifications: algorithmic transparency either brings useful disclosures that enhance code effectiveness and the quality of existing state calculators (such as the income-tax algorithm), or it could help enhance the accountability of administrative procedures (such as APB). Moreover, Birotteau's request specifies how this *dramaturgy of transparency* is *presented*: the credible and legitimate

quality of a citizen asking for “more transparency” needs to be displayed and performed, this requires argumentation and justifications. Depending on the context of when an algorithm is used, this qualification of the “legitimate citizen” corresponds to their identity and interests as a lay citizen, professional worker, advocate of certain democratic values and ambassador of an organisation. Behind the performative presentation of citizen claims for “more transparency” lies a politics of expertises and representativeness.

In this first part of the chapter, we have seen that the vocabulary used to qualify algorithms remained unstable: while the income-tax calculator has been described as a “source code” and a set of “administrative documents”, APB could be staged in many ways: as a math formula, software to access faculties, platform, website, centralised procedure and socio-technical system. If the term “algorithm” finally became a popular short-hand for this system a number of critics would prefer to contest the overall “public policy” driving this administrative procedure. What has then been activated through the APB controversy is the sublime figuration of the “algorithm” as a *theatrical character* capable of being responsible for an unfair administrative decision while paradoxically escaping a clear definition.

In the next part of this chapter I am going to show that even if the dramaturgy of algorithmic transparency was activated, in order to resolve this issue, Etalab needed to be situated as a pro-active advocate ready to help administrations with the challenge of achieving transparency. Reframed in theatrical terms, Etalab became a *stagehand*: the actor that will advise administrations on how to practice transparency. With its expertise in open data management and data science, the task force was well situated for creating the spatio-temporal moments when transparency could be practiced (the *stages*) and the adequate devices used by citizens to witness the accountability of public bodies. Since administrations such as universities and the DGFIP were unable to improve the transparency of their administrative decisions, Etalab



self-designated to act as a mediator situated between administrations, the regulator CADA, administrative courts and citizens.

## II) Activating the stagehand

### **Etalab, a stagehand with theatrical self-consciousness**

Etalab fed the issue of algorithmic transparency by writing and taking commitments to enhance the accountability of administrative algorithms on behalf of the French government. These missions representing a right and duty to act have been drafted at the Open Government Partnership Summit (OGP, 07-09/12/2016). This event organised in Paris by Etalab gathered a consortium of liberal democracies developing actions for a more open and transparent State. France joined the OGP in 2014 and became a co-president between 2015 and 2016 alongside the NGO World Resources Institute. Before detailing the content of these commitments in the next section, I would like to highlight Etalab's strategy to fabricate its role of *stagehand*.

Being an innocent transparency advocate was not the main reason why Etalab developed the OGP roadmap for itself: the organisation wanted *to intervene inside the theatre*. By intervening, I mean that the task force wanted to help in the configuration of how algorithmic transparency could be performed. The organisation needed a role. Having projects with the goal of making recommendations to administrations, developing a guide or organising workshops, Etalab became *the stagehand of the transparency theatre*. This has been clearly explained to me by Baudoyer at the very end of my fieldwork:

Isidore: "In any case it [the fact of being pro-active] puts the subject [algorithmic transparency] at the agenda you see, I still believe that it is in Etalab's way of functioning, it is how issues are brought up. [...] there

are very few topics on which we have said: "Ok it's a priority for 2016 or 2015 or 2014, which is called "public procurement", here is the roadmap on "public procurement..."

Me: "Yes, ok, I understand this, but you still have the OGP commitments though?"

Isidore: "Yeah, but why? Why do we have OGP commitments? Because I took this opportunity to give us a right to play."

Me: "A right to play? What do you mean by a right to play?"

Isidore: "Well, basically, why are we doing this [developing algorithmic transparency]? Because it's an OGP commitment. And why have we written it into an OGP commitment? In order to be able to do it."

Me: "Oh yes !! [confused laugh] but I thought that there must be things that obliged or directed you? I understood that in this context, it was the OGP commitments."

Isidore: "Yes, there are. In the same way that the existence of a new legal framework is another one [element giving us an opportunity to act]."

According to Baudoyer, Etalab took as an opportunity the contestation from civil society to legitimise its action and have a "*right to play*" in the theatre. Here, it strikes me that Baudoyer explicitly used the performative and theatrical language of "play" to describe Etalab positioning inside the battlefield towards more algorithmic transparency. Following Goffman (1963), we can say that Baudoyer had a *theatrical self-consciousness* — but I suspect that he allowed me to discover it only at the very end of the fieldwork. While expressed here by Baudoyer, this theatrical self-consciousness requires instruments and

documents such as the OGP commitments. This point has already been noted by STS scholar Stephen Hilgartner in his analysis of scientists' modes of communication to media, for him "theatrical self-consciousness [is] embodied not only at the individual level but also in procedures and material practices that instantiate it as a kind of distributed cognition" (Hilgartner, 2011, pp.192-193)

For Baudoyer, becoming a governmental strategic counsellor working on the shiny topic of algorithmic transparency led him to be highly regarded by his colleagues. His professional status evolved, between the end of 2018 and the beginning of 2019, he appeared on the Etalab website not only as the strategic counsellor for open data issues but also for the management of public sector algorithms. In September 2019, he started to teach a class at Sciences-Po Paris about "data and algorithms for public policy". Put differently, Etalab's pro-active performances were an occasion for Baudoyer to develop new skills and *transform* his appearance. Ultimately, the quest of algorithmic transparency is *transforming* organisational aims and actions. This proactivity of Etalab responded to the open-ended manners to approach the issue, as Baudoyer explained: "How do you put a topic on the agenda? With a little bit of international [the OGP], with a commitment to others [State members of OGP], by answering questions [addressed by administrations], seizing opportunities [such as my PhD thesis], and doing fieldwork [about the allocation of daycare places]."

Following Baudoyer, Etalab found a multiplicity of ways to stage the issue of algorithmic transparency. In theatrical terms, the algorithmic drama is conjured through a bundle of occasions and dependencies nurturing the organisational positioning of the service as a *stagehand*. But in doing so, the task force also risked appearing in a paradoxical situation driven by the opportunism of creating a role to intervene on this controversial topic. The stress of quickly finding an occasion to participate in the drama, the anxiety of the APB

controversy, and the pressure to maintain an influence both nationally and internationally: all of this explains Etalab's interventionist role.

According to the civil epistemology of democracy (Ezrahi, 1992) composed, in France, of citizens witnessing visible disclosures provided by administrations, Etalab was a troubling agent because its role remained ambiguous: was it only going to be a technical *stagehand* helping administrations to achieve transparency or also, and at the same time, a shadowy strategic guide securing administrative secrets? As some of its managers like Baudoyer are strong transparency advocates, can the organisation really be in favour of citizen contestability while also being a service of the Prime Minister? By being a *stagehand* situated between administrations, regulators and citizens, Etalab is a particularly well situated organisation for managing *the dualism of the theatre*. For one, the *stagehand* has an agency in orienting what is made visible and invisible. Indeed, as we will see in the next chapter, Etalab will help DGFIP negotiate and script transparency performances through a strategic meeting hidden from the audience. Etalab's position epitomises the *dual mode of appearance* inside a theatre, a notion put forward by Stephen Hilgartner: "the dialectic of self-revelation and concealment through which advisors present themselves" (Hilgartner, 2000, p.11). While Etalab publicised transparency as an important issue, the organisation opens at the same time a space to act in the shadow of negotiations between administrations and regulators.

The fact that Etalab made commitments on behalf of the French Government and was positioned to accompany administrations in creating disclosures means that the organisation had an agency and responsibility in providing credible justifications of how an algorithm is impacting an administrative decision. Reframed in theatrical terms, we are not anymore in a *theatre of proof* where an administration is seemingly alone in providing trustworthy disclosure. Etalab could now help to secure credible accounts and

provide advice to take charge of some of the performative labour of transparency enactment. As we will see in the next chapter, Etalab could for example provide advice on how to interpret the regulation and provide expertises and infrastructures to disclose algorithm source-codes. Here, it appears that Etalab epitomises the recent rise of infomediaries (Carter, 2016). Their commitment to the transformative power of datafication and algorithmisation and their agency in managing disclosures on behalf of administrations are crucial elements enabling *the theatre of transparency*. Indeed, these types of actors were absent in the scientific *theatre of proof*, whereas in the liberal-democratic *theatre of authority* Ezrahi foregrounded the use of science and technology by politicians and not by advisory boards and task forces such as Etalab.

Using the new resources of the OGP, Etalab could justify its action as a *stagehand* in charge of enhancing algorithmic transparency. And Etalab was legitimised in this move through three factors: its expertise in the management of open data; the recent hiring of two data scientists adding computational knowledge to the team; and finally, its institutional situation as an inter-ministry service operating the mediation between citizens and administrations. Inside the theatre of transparency, this legitimation allows Etalab to become an authorised voice providing trustful knowledge and credible advice (see Hilgartner, 2000, p.19). Etalab performed different fabricated roles: as a *proactive task force* the organisation nurtured the algorithmic transparency issue; as an *infomediary* it fostered the need of new regulation and devices; and as *stagehand* it opened the possibilities of strategic planning of disclosure. While the proactivity of the task force and its positions as an infomediary make it visible for observers, its role as a stagehand is more difficult to draw. This multiple and oscillatory appearance of Etalab mirrors the *dialectic of transparency*: its effects towards revelation or obfuscation. In the next section, I will detail what the commitments taken by the task force at the OGP entail and how they nurtured its positioning as a stagehand.

## **Etalab at the Open Government Partnership Summit**

The OGP Summit was the event that provided Etalab an opportunity to create itself missions of enhancing algorithmic transparency, as well as to generate a plan of action which would ensure its role as a *stagehand*. In this section I will discuss how the OGP summit offered a way to nurture the issue of algorithmic transparency. At this occasion, Etalab secured a place to intervene in the transparency theatre. What motivated Etalab was to be seen not only as a task force that improved the public obligation of transparency, but also as an innovative agent in charge of experimenting in this domain. The OGP summit enabled a *theatrical* self-branding since this partnership provides an image of States as moral actors and helps to “build-up” a community to witness this branding. It is working as a privileged club, a partnership where liberal-democracies stage their progressive ideas about the modernisation of States through digital technologies. Here, the *theatrical self-consciousness* of Etalab and its pursuit of publicity is not primarily used to impress citizens but to enhance its organisational infrastructure and skills inside a community of NGOs, infomediaries, task forces and state organisations.

Two commitments taken at the OGP Summit explicitly concerned the transparency of public algorithms. Commitment 15 states that France will “open and put in circulation public data” used and processed by State algorithms<sup>22</sup>. Then more clearly, commitment 16 proposes to “promote the opening of computational models and State simulators”<sup>23</sup>. As stated in Etalab’s 2018 action plan, the general goal of these engagements is to produce a “methodology with administrations to open the algorithms and codes contained within their information systems”<sup>24</sup>.

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22 - See: <http://suivi-gouvernement-ouvert.etalab.gouv.fr/fr/Engagement15.html> (Accessed: 18 July 2019)

23 - See: <http://suivi-gouvernement-ouvert.etalab.gouv.fr/fr/Engagement16.html> (Accessed: 18 July 2019)

24 - See online here : <https://gouvernement-ouvert.etalab.gouv.fr/pgo-concertation/topic/59b7a889db768b751899fd85>. (Accessed: 18 July 2019)

The action plan detailed specific missions that hoped to realise the commitments. Below a summary of this program:

ACTIONS	CALENDAR
Produce 5 monographs on public algorithms to identify issues in technical, legal and organisational terms. Involve civil society in this study.	2019
Make recommendations to administrations on essential information relating to public algorithms, in accordance with the principle of transparency of algorithms.	First Semester 2018
Develop a guide for administration on the openness of public source codes.	First Semester 2018
Organise hackathons around the opening of public algorithms	Second Semester 2018 - Second Semester 2019

*Table 3: Details of Etalab's roadmap to increase the transparency of algorithms and public source codes as presented in its 2018-2020 action plan.*

Also considering that these commitments and the plan of action form an Etalab initiative, it becomes that through the OGP, the interest for more transparency is to be framed as an object of governance. I am following here critical thinkers Stefano Harney and Fred Moten and their theory of governance politics: "Governance operates through the apparent auto-generation of these interests. [...] interests are solicited, offered up, and accumulated. [...] The generation of interests appears as wealth, plentitude, potential. It hides the waste of the raw immaterial [i.e. State data and source-code] and its reproduction in the furry of its conferences, consultations, and outreach. [...] [Governance] is the provocation of a certain kind of display, a display of interests as disinterestedness, a display of convertibility, a display of legibility" (Harney et al., 2013).

When transparency becomes an object of governance, actors such as Etalab voluntarily and generously set up their interests to nurture innovative programs of action committed to citizen participation. This auto-generation of

interests is what makes Etalab's action not exactly artificial but *theatrical and demonstrative*: the task force *stages* its commitment to the democratic wish of transparency and at the same time it creates an opportunity for its innovative "potential" — to be realised in "involving civil society" and organise "hackathons". The governance of transparency opens a door to generate or orient organisational objectives. This disinterested planification of algorithmic transparency requires the *staging* of actions and the "display" of commitments because the democratic motivations for accountability do not come directly from an external pressure exerted by civil society but from an auto-generative initiative launched at the OGP. The publicity needs to come from inner State members of the OGP. This governance is fostering data and source-codes "display" (they will be publicised), "convertibility" (they will become transparency devices) and "legibility" (their aim is to foster understanding).

In this attempt to transform the situation where algorithms are contested technologies, the two OGP engagements can be seen as an "adjustment" understood as an "appropriation, in which the impact constituency [citizens] tries to gain access to a process or artifact [the algorithm] from which it has been excluded" (Pfaffenberger, 1992, p.286). The political aim of a source-code as well as of legible accounts of algorithmic actions are "counterartefacts" fostering "alternative social contexts" to the growing "regularization" of algorithms (Pfaffenberger, 1992, p.307). Put differently, they are redressive actions in front of the growing naturalisation of algorithms in administrations. The hope is that with these counterartefacts, the audience will have a new context to understand the participation of algorithms in administrative decision-making. This hope is what nurtures the progressive governance of transparency and legitimises the auto-generation of a position representing citizen interests for more accountability. The creation of a new context for accountability give a space to stage the issue of algorithmic transparency and constitutes a challenge to face for Etalab since algorithmic issues is a new topic for this agency.



While Etalab used the OGP commitments to publicise a *dramaturgy of transparency* (justified as a mechanism enhancing accountability), the organisation also acts as a go-getter on the emerging topics of “algorithmic transparency”. This is just as if transparency needed to be performed as a form of innovation while it is claimed by citizens as a public duty. Indeed, it is not accidental if transparency initiatives developed under the “Open Gov” agenda are now dealing with innovative algorithms. Etalab is putting in practice ideas advocated by its guru, the entrepreneur Tim O’Reilly for whom the State must be transformed through data science and algorithmic management (O’Reilly, 2013). O’Reilly’s liberal ideas have been introduced at Etalab by Henri Verdier, the director of DINSIC, the digital directorate of the French State, Etalab being a sub-unit of this interministerial service (Verdier and Colin 2012. For a criticism see, Boullier 2012).

To summarise, by being committed to the OGP program, Etalab puts itself in a situation to test its capacity to take up the challenge of algorithmic transparency. This test is triggered by the auto-generation of interest for more algorithmic transparency. But this governance of transparency also risks to *stage* the interests of citizens. As I will develop in the next section, such a challenging test and staging was also a way to stay competitive in front of other State members of the OGP. To become a *stagehand* the pressure exerted on Etalab to stay visibly competitive needed to be monitored, ranked and put in practice through a commitment to innovation, experimentation and an effort to enter the international race for ethical artificial intelligence. I will further discuss these commitments in the next section.

## **Etalab and the race for innovation**

In this section, I argue that transparency initiatives not only communicate algorithms but also transform the context in which they are situated. The circulation of administrative algorithms and their naturalisation as bureaucratic tools may generate a favourable context for the development of AI services. The task force needed a “right to play” inside the theatre of transparency, if we understand it as a license to configure transparency performances but also as an incentive to experiment.

While nothing legally forced it to take such action, the French Open Data task force attributed itself such role of guiding consultant dubbed with the playfulness of being an experimenter organising “hackathons” with civil society organisations. We have to remember that Etalab is a policy lab committed to a form of experimentalism “enacting organisational flexibility, provisionality and anticipation” (Kimbell and Bailey, 2017, p.218). Indeed, the agency aimed at transforming administrative culture through innovative expertise (such as user experience design and data science), new organisation of work (i.e. agile methods, data sprints) and a prospective thinking centred on the uses of digital technologies in public sector organisations. The experimentalism serves the staging and planning of activities. As the decree institutionalising its missions specify, Etalab contributes in: “promoting innovation, experimentation, open, agile and iterative working methods, as well as synergies with civil society to decompartmentalise administrations and encourage the adoption of best professional practices in the digital field”<sup>25</sup>.

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25 - Article 6, Decree no. 2019-1088 of the 25<sup>th</sup> of October 2019 relating to the State's information and communication system and to the Interministerial Digital Department.

What was ostensibly an issue of transparency became for Baudoyer an opportunity to innovate. The commitment to experimentalism is clearly stated in the first OGP commitments adopted by Etalab: five new “case studies” need to be found in order to “identify” issues. In this quest for cases, not all opacity issues that emerged later pre-existed the OGP transparency initiative, they more certainly emerged only when the OGP roadmap was fulfilled.

A new issue was generated when Isidore Baudoyer initiated on his own authority the investigation of the mechanism allocating daycare places in nurseries. While to date no public controversy had formed on this topic, he saw it as a promising fieldsite for experimentation. This pro-activity of Baudoyer made the mechanism allocating daycare places in nurseries visible (as an “algorithm”) and this transparency initiative transformed the reality of nurseries: the “algorithm” became a disturbing new entity to be made transparent.

Baudoyer’s investigation even helped nursery managers to transform the allocation procedure using the formalism of the “algorithm” as a set of procedural instructions. His mission had the virtue of re-problematising (in algorithmic terms) what it means to allocate daycare places in nurseries. Political geographer Louise Amoore already noticed this phenomenon of “transparency as problematisation” when she provocatively stated that: “it is not the case that algorithms bring new problems of opacity and partiality but precisely that they illuminate the already present problem of locating a clear-sighted account in a knowable human subject” (Amoore, 2019, p.150). Consequently, algorithmic transparency is a quest for description and clarity. As pointed out by organisational scholar Oana Albu, the redefinition of problems in algorithmic parlance epitomises “the active or transformative representational role inherent to transparency efforts” (Albu, 2014, p.92).

If the institutionalisation of so-called “ethical” algorithms in the tech industry is often aligned with a market fundamentalism where “ethics owners

often constrain their own capacity to effect change within the narrow remit of what ‘the market’ might allow” (Metcalf et al., 2019), the same institutionalisation in the public sector seemed to be driven by an innovation fundamentalism. This is what pushed Baudoyer to kick-start an inquiry on the allocation of daycare places. While Etalab was advancing this program of action towards more algorithmic transparency, this would help French President Emmanuel Macron to render algorithms and AI socially acceptable — through more innovations. As we can understand in an interview from Wired Magazine given by Macron to present his strategy for AI in 2018<sup>26</sup>, the French president positioned transparency as a facilitator for enrolling citizens into the development of AI services: “If you want, precisely, to structure this debate [about ABP], you have to create the conditions of fairness of the algorithm and of its full transparency. I have to be confident for my people that there is no bias, at least no unfair bias, in this algorithm. I have to be able to tell French citizens, ‘OK, I encouraged this innovation because it will allow you to get access to new services, it will improve your lives—that’s a good innovation to you’. I have to guarantee there is no bias in terms of gender, age, or other individual characteristics, except if this is the one I decided on behalf of them or in front of them. This is a huge issue that needs to be addressed. If you don’t deal with it from the very beginning, if you don’t consider it is as important as developing innovation, you will miss something and at a point in time, it will block everything. Because people will eventually reject this innovation.”<sup>27</sup>

Macron’s *dramaturgy of transparency* serves to naturalise the use of algorithms by public bodies: it is a device of pacification used to open new markets and opportunities for AI innovators and experimenters such as Etalab. Such public policy discourse marked by a form of paternalism (“that’s a good

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26 - See: <https://www.aiforhumanity.fr>

27 - Thompson, N. (2018). ‘Emmanuel Macron Talks to WIRED About France’s AI Strategy’, Wired, 3 December. Available at:

[http://www.yorkpress.co.uk/sport/13339665.Gale\\_gears\\_up\\_for\\_pivotal\\_spell\\_for\\_Yorkshire/](http://www.yorkpress.co.uk/sport/13339665.Gale_gears_up_for_pivotal_spell_for_Yorkshire/) (Accessed: 24 September 2020).

innovation to you”) epitomised a profound technological determinism regarding the so-called “progress” of technology in the conduct of bureaucratic affairs.

Macron’s race for “ethical” and “transparent” artificial intelligence performed through innovations also transformed Etalab activity. In June 2018, three months after Macron’s interview in Wired and the announcement of the French AI strategy, the Interministerial Directorate for Public Transformation (DITP) and the Interministerial Directorate for Digital and State Information and Communication Systems (DINSIC), launched a call for expressions of interest to experiment with artificial intelligence in public services (AMI IA). As part of the DINSIC, Etalab was in charge of organising the call. Five months later and after fifty two analysed applications, six winners were announced by the Minister of Digital Affairs<sup>28</sup>. Then, a year later, this first experimentation through a call for expressions of interest was consolidated with the creation by Etalab of the “Lab IA” (*Laboratoire Intelligence Artificielle*), a team of managers and data scientists working as a task force to develop AI in public services<sup>29</sup>. A lab inside another lab, so to speak. Similar to Macron’s ideas to stage transparency as a mandatory prerequisite for innovation, one of the key missions of the LAB IA is to facilitate reflection on the ethical issues associated with AI in the public sphere<sup>30</sup>.

To summarise, while Etalab was a task force exclusively dedicated to open data management, fostering the algorithmisation of public services became one of its new missions. Ultimately, I argue that transparency initiatives not only *re-present* algorithms but could also *trans-form* the environment where they are situated. This transformative force is not only active at the level of a Parisian task force such as Etalab but also at the scale of a mundane nursery service of a French metropole.

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28 - See: <https://www.modernisation.gouv.fr/outils-et-methodes-pour-transformer/appele-a-manifestation-dinteret-intelligence-artificielle-annonce-des-laureats> (Accessed: 17 July 2020)

29 - See: <https://www.etalab.gouv.fr/datasciences-et-intelligence-artificielle> (Accessed: 17 July 2020)

30 - *Ibid*

In this second part of the chapter, we have seen that staging the issue of transparency helped Etalab to transform its position in order to appear capable of dealing with algorithmic problems. This movement towards organisational change also provided a context for innovating in the conduct of public action. Moreover, the OGP gave an occasion to advocate for new regulations and devices. In short, the Etalab team had the skills, organisational form and legitimacy to become a *stagehand*. But the service lacked three other elements to be ready for transparency to be practice: a device of transparency, a controversy it could manage — something less controversial than APB, a story providing events where its experimentalism could be freely expressed — and a witness claiming for more transparency. Here are the subjects of this chapter's next sections: Etalab has been the active force helping the Ministry of Digital Economy in creating the Right to Explanation of algorithmic decision-making (the device), and this right will soon be used by a journalist (the witness) on the main case study of this thesis, the French housing tax (the controversy).

### III) Activating the device

#### Institutionalising the Right to Explanation

The “Right to Explanation” of algorithmic decisions taken by administrations had first been drafted by Etalab Chief Jurist, Jean-Jacques Bixiou. It has then been promulgated in the Bill for a Digital Republic (October 2016), and finally institutionalised in the Code of Relations between the Public and the Administration (CRPA, 2017). Below I show how *if* you are an organisation concerned by this new regulation *you must then* follow a set of obligations.

If...

- you are a state administration, a local authority, a public or private law body intervening within the framework of a public service mission,
- you use algorithmic processing,
- with the help of this processing, you take individual administrative decisions with regard to natural or legal persons, under public or private law,
- and this processing is not covered by one of the secrets defined by law (e.g. government deliberations, national defence, conduct of foreign policy, state security, public safety, security of persons or information systems, investigation and prevention of offences).

...then, you are subjected to the three following obligations:

- an explicit mention of the use of an algorithm needs to appear on documents delivered to the public in the context of a public service mission,
- a general information on the main algorithmic processing used by your organisation needs to be published and publicized,
- a public administration is obliged to explain how the algorithm has been used in a particular administrative procedure if a French citizen is using their Right to Explanation. More precisely, a citizen can ask for: “the degree and mode of contribution of algorithmic processing to the decision-making [...] the processed data and their sources [...] the processing parameters and, if applicable, their weighting, applied to the situation of the person concerned; [...] the operations performed by the treatment;

In the “if” section, the conditions of the regulation constitutes the scope and constraints for the practice of transparency, whereas the “then” section provides the material manifestation of how transparency must be pursued:

when the Right to Explanation becomes a transparency and accountability device. This legal instrument is the main *device* of the *transparency theatre* because the conditions of its uses control the flow and framing of disclosures and their temporality will be ordered by CADA. For my study, the Right to Explanation is a means for the right to know (Schudson, 2015), the mechanism making transparency possible, visible and tangible (Strathern, 2000, p.313). Moreover, in the ANT and STS tradition, a device is nothing without a method realising its potential (Callon et al., 2007; Gross, 2015). In my case, the method is represented by the CADA and the administrative courts' modes of interactions with administrations.

The last obligation presented above is what guarantees accountability because what the citizen can request is not only the access to the data and its algorithmic treatments (this is an act of transparency), but an intelligible explanation providing a public justification (Bovens, 2007) of how and to what extent an algorithm participates in taking administrative decisions. In legal terms, a citizen can ask: “the degree and mode of contribution of algorithmic processing to the decision-making”<sup>31</sup>. If transparency is often an objectified, abstract, and decontextualised disclosure (Tsoukas, 1997, p.828), accountability must be argumentative and demonstrative, based on the unpacking of a contextual procedurality and personalised to a citizen.

As Bixiou explained to me, this institutionalisation of the Right as a device is a way to react to past wrongdoing — the APB controversy — a process common to the politics of transparency devices (Harvey, et al., 2013). In other words, the device of the *theatre of transparency* is here *activated* by the need for more transparent administrative decision-making. When the Bill was presented to the *Conseil d'État* for its “impact study” — a mandatory verification before a project of new laws goes to the Parliament — the institution gave another reason to transform the legal framework: the existing rights at that time were

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<sup>31</sup> -Article R. 311-3-1-2 of the French Code of Relations between the Public and the Administration (CRPA).



not sufficient to allow citizens to obtain full descriptions about how an algorithm participates in a given administrative decision<sup>32</sup>. Moreover, a new framework was needed to cope with the GDPR limitations as the European legislation did not allow a full Right to Explanation. More importantly, the GDPR only concerned fully automated decisions and not algorithms that simply help in taking decisions. I structured below a table comparing the previous French legal regime (left column), the new regulation coming with Axelle Lemaire’s Bill (in the middle column) and the European General Data Protection Regulation (on the right). Each of them treats the elements constituting a Right to Explanation of algorithmic decision-making differently. In the next section, I will describe the performative effect of the application of Loi Lemaire in redefining administrative procedures as “algorithms”.

Elements of the rights to explanation of algorithmic decision-making	Art. 39 of data protection and freedom of information laws bill, 06/01/1978	Art. 2 of Digital Republic Bill (Loi Lemaire). 07/10/2016	Article 13 to 15 and 22 of European General Data Protection Regulation. 04/05/16
Who is concerned?	Physical persons.	Any persons, both physical and legal entities.	Data subjects: identified and identifiable natural person
Types of algorithmic treatments?	Automated processing of personal data.	Any algorithmic treatment that is the basis for an individual decision.	Automated processing, including profiling, which produces legal effects concerning them or similarly significantly affects them <sup>33</sup> .
What can citizens claim?	Information making it possible to know and challenge the logic underlying automated processing.	Rules defining the algorithmic processing as well as the main characteristics of its implementation.	Meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the

32 - “the only provisions of Article 39 of the Act of 6th of January 1978, in terms of their scope, reach and limits [...] do not make it possible to provide complete information to persons subjected to algorithmic processing.” (Conseil D’Etat, 2015)

33 - See Recital 71 of the GDPR : “In any case, such processing should be subject to suitable safeguards, which should include specific information to the data subject and the right to obtain human intervention, to express his or her point of view, to obtain an explanation of the decision reached after such assessment and to challenge the decision. Such measure should not concern a child.”

			data subject
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*Table 4: Comparison of competitive current legal framework providing a Right to Explanation of algorithmic decision-making in France. Adapted from Conseil d'État, Étude d'impact. Projet de Loi pour une République Numérique, 09/12/2015.*

## The provocation of administrative procedures as “algorithms”

In the last section of this part, I would like to emphasise a particular novelty of the new French legal regime, one that is very important for *the activation of the theatre*: the consecration in the regulation of the label “algorithm” as the entity participating in the administrative decision-making. Here the algorithm will become a *theatrical character* refiguring bureaucratic practices in algorithmic terms. It is “theatrical” in the sense that in order to become transparent, administrative procedures need to be *staged* as algorithms. For administrations as well as for citizens, the term “algorithm” came to redefine administrative practices that were previously not qualified as “algorithmic”. For example, in response to citizen requests, the regulator CADA qualified the following systems as algorithms: a decision tree used to coordinate the intervention of firefighters and ambulances<sup>34</sup>, the calculus of pensions for independent workers<sup>35</sup> or even a grid of criteria used to score secondary schools students willing to enter a path of excellence in a special high school<sup>36</sup>.

These re-descriptions are surprising since the popular imagination reified algorithms as computational black boxes materialised in code and written in programming languages (i.e. Pasquale, 2015; O’Neil, 2016. For a

34 -See the FOIA response from CADA: <http://cada.data.gouv.fr/20172357/>

35 -See the FOIA response from CADA: <http://cada.data.gouv.fr/20175012/>

36 -See the FOIA response from CADA: <http://cada.data.gouv.fr/20173235/>

criticism of this position see; Seaver, 2017; Sack, 2019, pp.79–106). But in the context of my study, only the CADA and administrative courts have the power to determine the ontological presence of an algorithm in a given administrative procedure. The truth of the legal qualification (Cayla, 1993) redefining administrative procedures as algorithms has its own mode of existence (Latour, 2013) that could be contested by other fields acting as custodian of algorithmic knowledge — domains such as computer science. The refiguring of administrative procedures as algorithms is a performative effect of the Right to Explanation: its capacity to generate entities and force them to emerge (Hildebrandt, 2020, pp.77–78). If the Right to Explanation has performative effects, using an ANT approach (Callon et al., 2007:2), we can say that it gained an agency as a device, it articulates actions according to an algorithmic formalism. As a device, the Right to Explanation helps to re-specify administrative action as a procedural activity similar to an “algorithm”. But it also performatively creates the very reality of the entity it is supposed to make transparent. In other words, by trying to find a solution to unfair administrative decisions, the regulation has *provoked* the coming into being of the entity “algorithm”, this effect is a “provocation of reality” (Muniesa, 2014, p.23). I summarise below in a table the operations of this provocation and its transformative effects inside the theatre of transparency.

Mode of Performing	Entities through which the performativity is applied	Devices of Performativity	Activation of theatrical entities or techniques	Transformative effects
Provocation	Administrative procedures  Ex: Allocation of daycare places	Transparency devices  Ex : Right to Explanation of algorithmic decision-making (Loi Lemaire 2016)	Coming into being of “algorithms” as objects of transparency	Redefinition of administrative procedures as “algorithms”.

Table 5: *The provocative performativity of the new legal regime.*

The troubling redefinition of administrative procedures as algorithms is caused by the absence of a legal definition of algorithms.<sup>37</sup> Indeed, the appearance of the term “algorithm” in the Lemaire Bill of 2016 does not come with the adoption of a clear legal specification of the notion. As French jurist Liane Huttner told me, the legislator probably intended to leave it up to the judge and the legal doctrine to define the concept and establish the criteria for its classification. For Huttner, it appears that as early as 1995, the Paris Court of Appeal adopted a definition of the term. In a judgment on copyright protection, the Paris Court of Appeal described the algorithm as "a succession of operations that in no way reproduces software and cannot be considered as such"<sup>38</sup>. Twenty years later, the definition remains similar. Indeed, in 2015, the Court of Appeal of Caen defined the algorithm as a "simple succession of operations that only translate a logical statement of functionalities"<sup>39</sup>. Moreover, the legal doctrine will confirm this approach: the lexicon of legal terms defines an algorithm as "a finite and unambiguous sequence of operations or instructions that make it possible to solve a problem or obtain a result from input elements. It can be executed automatically." (Debard and Guinchard, 2019, p.58)

From these definitions delineated by Huttner, one important remark should be drawn: these qualifications do not consider the algorithm as a strict digital object made of programming code. The study of these different definitions highlights a fundamental aspect: neither the jurisdictions nor the administrations seem to consider algorithms to be specific to the computer or digital environment. It is necessary and sufficient if the algorithm is a logical sequence of instructions.

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<sup>37</sup> -With the exception of the definition provided by the decree of 27 June 1989 relating to the enrichment of the “informatique” vocabulary: "study of the resolution of problems by the implementation of sequences of elementary operations according to a defined process leading to a solution." But this definition has only a limited normative power.

<sup>38</sup> -Paris, 23 janv. 1995, LPA, 19 avr. 1996, p. 4, obs. X. Daverat.

<sup>39</sup> - Legalis (2015). ‘Cour d’appel de Caen, chambre des appels correctionnels, arrêt du 18 mars 2015’, 18 March, Available at: <https://www.legalis.net/jurisprudences/cour-dappel-de-caen-chambre-des-appels-correctionnels-arret-du-18-mars-2015/> (Accessed: 24 September 2020).

The legal qualifications do not add any particular criteria or characteristics. They oscillate between a pre-modern definition — a list of rules or instructions — and a modern definition of the algorithm — the abstract ordering of instructions written as an input-output relationship — as it was already presented by computer scientist Donald Knuth at the beginning of the 1970s.

At first, when we start to think that the French administrative law equates administrative procedures with algorithms, we have a “cognitive dissonance” blurring our understanding of the situation — a typical effect of *post-digital* processes (Berry, 2015, p.53). If the algorithm is then not any more attached to the digital environment it becomes a *post-digital* entity used to envision administrative procedures as “algorithmic” instructions, a practical scheme with explanatory effects, a way to sum up bureaucratic proceduralism. As a concept, the *post-digital* makes the observable dimensions of algorithmic thinking manifest: its “procedural epistemology” (Abelson and Sussman, 1985, p.xvi) as well as its associated affordances in everyday life (Berry, 2015, p.47). As media philosopher David Berry continues, here the *post-digital* is less an aesthetic than “a logic that informs the re-presentation of space and time” (Berry, 2015, p.45). Indeed, the figuring potential of the “algorithm” is used to reframe the temporal and spatial ordering of administrative procedure: it is the concatenation of different instructions coming one after another. As expressed by French administrative courts, the algorithm-procedure is a “succession” or “sequence” of “functionalities”. Put differently, when the formalism of the algorithm mimics the bureaucratic procedure, an apparent reunion is created: “an abstract unity of reified elements” would have said Berry (2015, p.51).

The performativity of the new French legal regime — as a practice capable of reformulating an administrative procedure into an algorithm — means that this change in vocabulary *transforms* the actors. As I have shown briefly with Isidore Baudoyer's investigation of the system for allocating places

in nurseries, the performative transformation is first of all effective at the level of the discourse of administrations: the algorithm is a new concept introduced to define all or part of an administrative procedure. This test is therefore of a discursive nature: the concept is surprisingly added to or superimposed on the existing administrative vocabulary.

To summarise: if a controversy regarding administrative transparency naturally emerged, it was through Etalab's pro-activity in helping to create the Right to Explanation that the "algorithm" became the central object of public sector transparency. As we have seen in the first part, even during the APB controversy, the "algorithm" entity was unstabilised since the APB system was seen either as the implementation of a public policy or it was defined with another information materiality (e.g. a platform, website, allocation system). In short, as a device the Right to Explanation had the effect of specifying the issue: the political concerns should be on algorithms and how they participated in a given administrative decision. How Etalab and the DGFIP faced and negotiated this demand for more algorithmic transparency when a journalist targeted the housing tax is the subject of the next chapter. In the last section of this chapter, I will contextualise how this journalist became the main *witness of the transparency theatre*.

#### **IV) Activating the witness**

Now that the algorithmic transparency issue has been publicised by the APB controversy, that Etalab is legitimised by its plan of action, the Right to Explanation was ready to be used as a device enhancing transparency and accountability. Indeed, before journalist Victor d'Aiglemont used the Right to Explanation to target the French housing tax, everything was in place for transparency to be practiced, but the theatre missed a key actor: the *witness*.

This last section of the chapter will simply present the context and rationale leading d'Aiglemont to target the DGFIP, the same institution attacked by César Birotteau. Through this contestation and his publications, d'Aiglemont will become the missing *witness*.

Victor d'Aiglemont is known in the field of French governmental digital innovation for reporting stories at the intersection of law and digital technologies mainly using open source information. Victor d'Aiglemont confessed to me that along 2017, he sent more than seventy Freedom of Information requests to the CADA. During an informal lunch, an MP from Macron's party reported to me a phrase about Victor d'Aiglemont pronounced by the new Minister of Digital Economy Mounir Mahjoubi: "I think he hates me". According to Baudoyer, Axelle Lemaire, the Minister responsible for the new Right to Explanation and Mahjoubi's predecessor once said in the opening of a conference that she was not going to talk if Victor d'Aiglemont was in the room. Public officials want to keep their distance from him because he gained the reputation of a serious watchdog. He epitomises the emergence of journalists that since the 1960's portray themselves as aggressive muckrakers in order to advance their agenda for more transparency (Heemsbergen, 2013, pp.49-50. Schudson, 2015, p.153). This corrosivity has been naturalised as the role he must *stage* to enrol citizens in his articles, that is his way to perform the *dramaturgy of transparency*. Nevertheless, when I interviewed him, d'Aiglemont tried to give a more nuanced positioning:

"Me: In Nantes, at the beginning of the workshop on algorithms, Etalab presented you as a mediator and an intermediary between citizens and administrations, is that a position you claim? How do you see your role on the topic of algorithmic transparency?"

Victor : I'm a journalist and I don't think it's my role to have done that, to have requested to the CADA. I think I went a little bit beyond that. But it's about claiming, assuming, a position as an engaged journalist. As I followed what happened on the Digital Republic Bill, I wanted to see how it was applied and seeing that globally it was not respected, I said to myself, well, I'm going to try to tickle them, to see what's going on. And that's part of the game, to go and provoke Bercy [the DGFIP], the CAF [*Caisse d'Allocations Familiales*, the social benefits agency] to see what was going on.”

Regarding the housing tax, d'Aiglemont first requested to have an explanation of his total tax amount to his local fiscal office. Left without a response, on the 12th of December 2017 he sent a request to the CADA in order to obtain the rules defining the algorithmic treatment used for the housing tax calculation, and the main implementation characteristics of this same treatment. In his view, he only publicised this story because among all the requests he sent, this one succeeded, and he also thought that this mediatisation could force the DGFIP to fulfil accountability requirements. According to this testimony, we can say that in order to become a *witness* performing contestability, d'Aiglemont played the “game” of the aggressive journalist “tickling” administrations.

In the civil epistemology of democracy (Ezrahi, 1992), d'Aiglemont is more clearly identified as the *mediator* willing to inform the public about the incapacity of administrations to be accountable: his efforts are pushed towards orchestrating the public shaming of the government's information retention. This is the way we can identify and position him when we read his articles and when Etalab identified him as an ambassador of civil society. His paywalled publications gathered a community of followers around him and helped to publicise the issue of algorithmic transparency to a niche audience of other



watchdogs, civil servants and militants of civil liberties. While he is sincerely advocating for the transparency of State algorithms, he was not personally concerned by an unfair algorithmic decision-making impacting his administrative life: here is why his actions will appear *theatrical* and demonstrative. He simply wants to make a point about administrations' incapacity to become accountable. And in doing so, he does not appear as a legitimate *witness* in need of accountability.

By acting both as a *mediator between* civil society and administrations, and as a *witness* in a contestation *against* an administration, d'Aiglemont operates a clash inside the civil epistemology of democracy where these two roles must be more strictly separated in order to allow parties to express claims in their own terms and through their self-presentations. As a *mediator*, he could have helped to "assemble civil society" through the creation of public discussion using transparency as a broad claim of social justice (Barry, 2013, pp.67-72). But his role as a *witness* took the lead and he therefore performed a contestability that brought dissent. The fact that he was not personally motivated by accountability and his insistence on discussing the details of the new regulation created suspicions. If transparency has been conceptualised as a political device used to prepare civil society for discussing controversial topics and potentially a way to pacify these debates (Barry, 2013, p.70), d'Aiglemont replaced his role as a *mediator* preparing this discussion in favour of a resistance. Consequently, not all citizens might feel well represented by him because he spoke too much with the language of the regulation and not enough the language of justice. Therefore, his role as a legitimate *witness* will not be easily validated and this will have consequences for the pursuit of the contestation narrated in the next chapters.

During an informal meeting where I presented my work, the general rapporteur and general secretary at the CADA explained to me how they were not particularly in favour of d'Aiglemont's way of using the Right to Explanation.

For them, he was deflecting the spirit of this legal instrument because their role as regulators is to provide documents and explanations to citizens concerned by unfair algorithmic decision making — which was not d'Aiglemont's case. The CADA is defending the right to access administrative documents and is situated as a first aid before a citizen goes to the administrative court: a way to arm citizens before a litigation. For the CADA administrators, Victor d'Aiglemont's intent was different: he used the Right to Explanation as a way to publicise the dysfunction and inefficacy of administrations in their attempt to be aligned with the new Digital Republic Bill. Indeed, d'Aiglemont has been explicit with me about his ambition:

“I was more interested in getting the administration to conform to the Right to Explanation, after that if they answered [he didn't care], that wasn't going to contribute to one of my articles, or at the very least I may be interested to see if the algorithm is working in this or that way.”

The CADA administrators also criticised d'Aiglemont's action because he overflowed the institution with a large number of requests, according to them, because of the repeated requests of d'Aiglemont's and of few others watchdogs, the *Conseil d'État* reinforced the CADA position on this subject by putting constraints limiting the number of abusive requests.

Above all, like Etalab, d'Aiglemont wanted to have a *role in the theatre*, but in order to become a *witness* he naturalised the classical contestability position of media actors, presented himself as an aggressive watchdog and instrumentalised the Right to Explanation as a way to test the administrations' alignment with the new regulation. While citizens benefited from his active disturbance, he is not fully legitimate to claim for transparency, or at least his FOIA requests appear demonstrative. Despite the fact that he does not completely assume his role as an ambassador of the citizen - “*I don't think it's my role [...] to have requested the CADA*” - Etalab and more broadly the public still

positioned him as such. Journalists often appear as ambassadors of the citizens because transparency devices “extend and multiply witnessing as a source of credibility from established elites who are trustworthy and credible to publics who are more unreliable and uncertain witnesses.” (Harvey, et al., 2013, p.296). I summarise below in a table d’Aiglemont’s performative self-presentation and the transformative effects it has inside the theatre of transparency.

Mode of Performing	Entities through which the performativity is applied	Devices of Performativity	Activation of theatrical entities or techniques	Transformative effects
Self-presentation	Journalists and their publications.  Ex: Victor d’Aiglemont’s articles for Next Impact.	Persuasion using transparency discourses, motivations, justifications.  Social dramaturgy: professional status and roles giving credibility and legitimacy.	Journalists emerged as mediators and/or transparency witnesses.  News media is situated as a device of transparency and publicity.	The journalist is generating an audience/public for transparency reporting.

*Table 6: The self-presentation of journalists.*

For the journalist Jérôme Hourdeaux<sup>40</sup>, investigating the digitalisation of the State for the online journal Mediapart, d’Aiglemont’s contestability position is simply a way to defend the freedom of press and the right to know, in a moment when whistleblower Julian Assange, founder of WikiLeaks, was physically and mentally suffering in London’s Ecuador embassy where he has been forced to reside since 2012. Here, d’Aiglemont appears more clearly like Etalab: as a transparency advocate. For him the transparency of administrations is an end in itself: they must be open for scrutiny because they need to respect the new legal framework. This position echoes the instrumental libertarianism of many transparency advocates: source codes inevitably need to be opened;

<sup>40</sup> -Encountered in June 2018.

“information wants to be free” said Silicon Valley guru Stewart Brand in 1988 at the first Hackers Conference (Turner, 2006, pp.257-269).

But a form of openness used only to perform scrutiny is not enough to provide accountability, because being account-*able* requires not only to communicate the broad algorithmic treatments but to be in capacity to explain and justify “the degree and mode of contribution of algorithmic processing to the decision-making”<sup>41</sup>. If d’Aiglemont wanted to push for such descriptive justification, he was not fully concerned by a particular unfair tax amount attached to his status as a tenant, therefore he has instrumentalised the Right in order to test administrations’ capacity to be in compliance with the new regulation. In the next chapter, we will see how Etalab and the DGFIP responded to his request, but first, allow me to reconstruct how the theatre has been activated.

## Conclusion

This chapter provides an empirical analysis of the performativity of FOIA requests and the emergence of the contested figure of the algorithm in recent years in France. I reconstructed the different controversies about algorithmic transparency that emerged between 2014 and 2018 and which led to its fixation as a standing public issue. I presented how political concerns about algorithms surfaced first and foremost as a problem of administrative transparency and the key role of Etalab in maintaining these debates in the foreground. The description and analysis of the controversies also serve to introduce the empirical context of my inquiry and helped me to delineate the main actors, many of which we are going to encounter in the next empirical chapters.

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<sup>41</sup> -Article R 311-3-1-2, CRPA.

Through the analysis of contestations between administrations and citizens, this chapter unpacked the *modus operandi* of transparency: it is a performative practice. Indeed, I delineated three modes through which transparency is claimed and performed: the *self-presentation* mode is focused on the credible staging of citizen identities, the *controversy* mode reveals the key influence of news media in staging an issue, and the *provocation* mechanism is focused on discourses about algorithms, that make them real. These modes of performing can also be viewed through normative lenses: while the credible *self-presentation* and excessive *controversy* epitomise the expected function of citizens and news media inside the civil epistemology of democracy, the *provocative* effect of the Right to Explanation created a normative and legal definition of the algorithm.

Under the new algorithmic regime this performativity (of provocation) is also creatively *transformative*: the materiality of State calculators has been configured as administrative documents; the ontology of administrative procedures has been troubled by an algorithmic language; Etalab has been granted new missions, expertises, and occasions to experiment; and finally the pressure to enter the race for the development of ethical AI will certainly continue to facilitate State algorithmisation. Inside the drama, we can say that the theatrical function of the “algorithm” is two-fold: it helps to reframe State actions in computational terms (thanks to the provocative effect of the Right to Explanation), as well as to naturalise the development of new AI services. Figuring algorithms is therefore a political operation feeding organisational objectives committed to the digitalisation of administrations.

This chapter also delineated the elements and actors that helped to activate the theatre of transparency, their performative modes and rationales for action. It is primarily the *dramaturgy of transparency* and its seductive discourse that enroll citizens and organisations into considering algorithmic transparency as an important issue. The need for more disclosure generated by public

controversies justified the creation of a *device*: the Right to Explanation of algorithmic decision-making. A device which in itself ordered a specific *temporality* of disclosures based on the bureaucratic slowness of administrative regulation. Meanwhile, Etalab has been positioned as a *stagehand* helping administrations face the use of the *device*. Throughout all the disputes, citizens negotiated their positions to appear as legitimate *witnesses* while journalists attempted to become *mediators* between administrations and civil society. Through these transformations, key entities and techniques of the theatre of transparency will configure the contestation about the housing tax narrated in the following chapters.

Finally, the central situation of Etalab as a task force that made commitments for algorithmic accountability on behalf of France, and wrote the regulation institutionalising the Right to Explanation is a sign of the prominent agency of infomediaries in managing transparency. The recent emergence of this governmental task force is transforming the conduct of transparency as a public experiment since the agency take in charge some of the theatrical techniques that — in scholarly work in STS on the *theatre of proofs and authority* — were previously attributed to actors who needed to secure their credibility, namely scientists and politicians. This configuration of the *theatre of transparency* foregrounds the ambiguous situation of Etalab as an organisation that is legally an administration, but one advocating for the transparency of others, while at the same time pushing for the empowerment of citizens to contest.

## Chapter 5: Setting the Theatre

### Negotiating and Scripting transparency

#### Introduction

In the previous chapter, I unpacked the politics of algorithms in French administrative contexts and gave an understanding of performative transformations provoked by the use of the Right to Explanation of algorithmic decision-making. In doing so, I described contestations targeting French administrative algorithms from 2014 till 2018 and reconstituted the emergence of the transparency theatre: its performers (DGFIP and Etalab), dramaturgy (discourses justifying disclosures), device (the mentioned Right to Explanation) and most visible witness (the journalist Victor d'Aiglemont). In delineating the activation of the transparency theatre, I argued that transparency is not simply a moral ideal or policy but a performative practice involving the staging of identities, conflicts and technological artefacts. In doing so I specified three modes of performing through which transparency is claimed and performed: the *self-presentation* of citizens, the *controversial* pressure of news media and the *provocation* of algorithms as objects of transparency.

If in the previous chapter we have seen how transparency is performed, this chapter narrates how actors evaluate its risk, *negotiate* its scope and play with its limits thanks to *scripting* techniques. I develop these ideas through a case study analysis centred on a particular algorithm: the French housing tax, a system that is managed by DGFIP and targeted by a FOI request originated by Victor d'Aiglemont. The ethnographic account is focused on the moment when DGFIP came to Etalab to formulate a response to d'Aiglemont. When the two teams will understand that full accountability of the housing tax algorithm is impossible, they will *negotiate* and *script* the scope and style of prospective disclosures. Envisioning the limits of transparency derived from this reflexive

moment where performances need to be prospectively framed and modulated. The two teams debated the constraints and opportunities for disclosure provided by the Right to Explanation and envisioned how to provide disclosure adequate to their organisational agenda. Using for the first time the Right to Explanation, d'Aiglemont was asking for an individualised explanation of his own housing tax amount. The response of the two teams in the face of the difficulty to produce full accountability will neither be critical (“accountability is impossible anyway”) nor cynical (“let’s then orchestrate the realm of secrecy”) but practical (“how can we construct the practice of transparency as something do-able and useful?”).

The events narrated in this chapter prepared and oriented the design of disclosures that took place after this phase of planification (Chapter 6). I am investigating here a technique described by American sociologist Erving Goffman for whom the “treatment” of the absent audience has always been crucial to script the prospective performance of a team: “When the members of a team go backstage where the audience cannot see or hear them [...] plans may be worked out for “selling” them, or employing “angles” against them, or pacifying them” (Goffman, 1959, p.170).

Throughout the chapter, I will argue that the transparency device of the Right to Explanation provides ways to make disclosures *selectively* frugal, adaptable to certain audiences and orchestrated in a timely manner. The Right opens up different ways to orient the expectations of future FOIA requesters. Consequently, transparency will be aligned with a political agenda that aims at covering certain organisational realities (Strathern, 2000b; Neyland, 2007a; Heimstädt, 2017; Flyverbom, 2019). Far from ensuring the full accountability of the housing tax algorithm, *negotiating* and *scripting* transparency then appears more precisely as an attempt to order the dialectic of a theatre where the concealment and publicity of information are concomitant.



This paradoxical phenomenon has been described in the transparency literature as an “institutional information decoupling” where disclosures are selected, bended and orchestrated (Heimstädt, 2017), a “prism” of curation through which not all information passes (Flyverbom, 2019), a distribution of capacities blocking the vision of certain open data (Birchall, 2017, drawing on Rancière, 2000), or furthermore as an “oscillation” of visibility and invisibility (Strathern, 2000, p.317. See also, Corsín Jiménez, 2011, p.191). This path of research is important to show the enactment of framed disclosure but it seemed too information-oriented since it simply describes a reintroduction of an information asymmetry. Moreover, this track of research points to an “effect” of disclosure after they have been performed and seen from the audience. My aim is different, I will unpack how this framing of disclosure is configured *in practice by actors* through theatrical moves involving the staging of identities, conflicts and algorithms. Indeed, just like in the previous chapter, actors will present their professional status in a certain way, intervene in the understanding of algorithmic issues, and figure the housing tax “algorithm” in disparate manners.

This chapter contributes to the literature on framed disclosure in specifying the *theatre of transparency* as a peculiar configuration ordering the dualism of showing/hiding information about algorithms. This dialectic will be *negotiated and scripted* by civil servants through performances occurring during a strategic meeting. The chapter is organised in ethnographic scenes sequenced in the chronological order of how the topics have been negotiated. The evolution of topics and the appearance of a new character opens a new scene. The first scene set up the theatrical stage of transparency negotiation thanks to an auto-ethnographic account presenting the main performers and atmosphere of the meeting. Then, the performance of DGFIP and Etalab focuses on four topics of discussion: what depth of disclosures the Right enforces (Scene 2); how to anticipate and plan the risk of future contestability (Scene 3); what is the ontology of the housing tax as an “algorithm” (Scene 4) and how to use disclosure as an occasion to brand a form of exemplarity (Scene 5).

Despite the fact that this strategic meeting was not formalised and rigidly structured, it is possible to identify three phases of actions: one sequence of negotiation and scripting regarding the limits of transparency (Scene 2 and 3); one moment of strict negotiation about the algorithmic formalism of the object of transparency (Scene 4); and finally one last phase of negotiation and minimal scripting centred on the publication of transparency as a bragging exemplarity (Scene 5).

Ultimately, the ethnographic account will show that these three phases will be performed by *social, discursive and technical* means: through the embodied and convincing performances of experts, using an administrative jargon and complex legal device. Consequently, the *theatre of transparency* will be configured as a way to pacify future witnesses thanks to actors' *staging, dramaturgical* resources and the way they *instrumentalised* the legal device and use.

### **Scene 1. Anticipating the curious gazes.**

The encounter with the DGFIP took place on the 28th of May 2018. At the beginning of a long corridor where the meeting happened, two things were triumphantly displayed on a bookshelf. First: an MIT press book about the Minitel (Mailland and Driscoll, 2017). The French are highly proud of their proto-web terminal running from 1980 to 2012. They are even prouder when a book is published about it in English, in the prestigious Platform Studies series. Etalab is the team willing to transform administrations into platforms, and in a way some could claim that Minitel was a proto-platform. Below the book, I found a copy of that day's edition of the newspaper Le Monde. In this high sphere of administrations, civil servants like to show that they are "well-informed citizens" (Schütz, 1946), especially in the service dedicated to the maintenance and sharing of French Open Data repositories.

After the bookshelf, we passed by the office of Henri Verdier, the General Data Administrator, promoter in France of the State as a platform (Pezziardi and Verdier, 2017) and director of DINSIC, the Interministerial Directorate of Digital and State Information and Communication System. It is the service managing the whole digital transformation of the French state, Etalab being a sub-unit of DINSIC. Trained as a humanist but known as an entrepreneur, Verdier introduced data science and algorithms as the transformative force of French bureaucracy (Verdier and Collin, 2012. For a criticism see Boullier, 2012). When passing in front of Verdier's office, I remembered my first meeting with Etalab's strategic counsellor Isidore Baudoyer. He was amused at showing me that from the perspective we had in looking through the glass door inside Verdier's office, we could not see who the general data administrator was meeting, but we could see if he was there working at his desk. Verdier's workload and performance could be visible but his collaborators need to stay out of sight. The glass transparency of the door and the interior design of the office is operating as a topological technique to manage distances to certain organisational realities: a way to anticipate curious gazes and enforce a "tact in regard to places" (Goffman, 1959, p.147). Similarly, the encounter we were going to attend will also be about anticipating the limits of transparency.

When arriving at the office dedicated to our meeting, I discreetly experimented the move suggested to me by Baudoyer — to come as an observer — and successfully entered the scene. Nobody asked for any kind of presentation except a polite and discrete "Bonjour". I tried to be as invisible as I could be. But as a not yet disciplined performer experimenting with the arts of impression management (Goffman, 1959), I made only one *faux-pas* when entering the scene: I kept around my neck the red badge exhibiting the fact that I am a "VISITEUR" - as it is written in capital letters. During the first week of the ethnography, I did not have yet the official badge that would let me enter the

building without giving my ID at the information desk. This “unmeant gesture” of displaying my identity as an outsider might have undermined my discretion (Goffman, 1959, p.137). Maybe, I also wanted to signal that I was an external member of Etalab. But the fact we had not introduced each other indicates that, like me, members of DGFIP did not necessarily want to disclose their identity. Indeed, except DGFIP data administrator Jean-Frédéric Taillefer, the five other civil servants accompanying him did not present themselves.

Etalab and DGFIP teams were facing each other in an impersonal meeting room with white walls, grey tables and black chairs, the same space you can find in an hotel near an international airport, in every university and a lot of companies: the typical aesthetic of office culture, the same that reified the proceduralism of bureaucracy and its cult of (algorithmic) decision-making. The door is identical to Verdier’s one, the scene is visible from the outside, the negotiation will not be fully locked. Visually it just looked like any meeting, nothing clandestine about it but a tense ambiance of fleeting glances. Here is the scenery where the performance takes place and the dry painted background of the event: a blank rectangle waiting to be filled with performances of transparency negotiation. Have I entered a scene dedicated to contestability neutralisation or accountability fulfillment? The performance of actors narrated in the following scenes will respond to this question.

Etalab was represented by chief jurist Jean-Jacques Bixiou, the data scientist in charge of preparing the housing tax source-code Célestine Rabourdin and strategic counsellor Isidore Baudoyer. The team will be joined later by Michel Chrestien from the DINSIC service of “performance and risk management” — a topical title for this type of encounter. During most of the meeting, the discussions took place between Taillefer and Bixiou, chief against chief. Note that Henri Verdier invented the position of “data administrator” assumed by Taillefer and created in all ministries a network of data ambassadors

working as evangelists of Open Government and experimenters of algorithmic management.

The clothes of each chief played a role in embodying their position. In representing Etalab as the creative and relaxed “start-up style” administration Bixiou had a pink short sleeves shirt with thin blue lines, no tie, a seemingly classical dark blue suit trousers but with a hipster  $\frac{7}{8}$  cut showing his colorful socks made of a complex pattern and his polished black leather shoes. If Bixiou was almost eccentric while keeping his lawyer’s seriousness, Taillefer had a typical grey costume with a tie, the same as every average bureau employee, the one you needed when you are trying not to attract suspicion and keep your nerves cool. The pageantry of each chief tells a lot about their institutional positions. In the “vanities” section of Blaise Pascal’s *Thoughts* (1669), the French savant beautifully exposed how the artifice of work uniforms was a way to reinforce the legitimacy of experts: “When sleep has relieved us of the weariness of our reason, we have to get up with a jolt after the fumes and wipe the impressions of this mistress of the world [the imagination]. Our magistrates are fully aware of this mystery. Their scarlet robes, and ermine, in which they wrap themselves like furred cats, the halls in which they administer justice, the fleur de lis, all this imposing array of importance, and if doctors had not their gowns and mules, and the learned in the law their square caps and robes four times the size required, they would never have imposed upon the world, which cannot resist the effect of this show of authority” (Pascal, 1908, p.23).

In short, Bixiou was wearing the outfit of the creative class consultant while Taillefer had the suit of the respectful *haut fonctionnaire* who graduated from the *Ecole Nationale d’Administration* — nothing less than the school training French presidents. Their clothes were devices embodying the performative function of their titles and organisations. Now that I have introduced the atmosphere, performers and stage of the meeting, the play of negotiation could start.

## Scene 2. Negotiating the limits of algorithmic transparency

DGFIP's data administrator Jean-Frédéric Taillefer began to speak with an impressive calm flow, dense sentences, a good dose of syntactic sugar and precious administrative expressions. He spoke like an erudite administrative book, signifying his position as a civil servant mastering the esoteric jargon of procedures. "Your opinion is of interest for us in terms of legibility [of the housing tax]" he first said to the Etalab team. The pressure exerted by the journalist Victor d'Aiglemont on Taillefer was to make the housing tax algorithm readable. Indeed, laws institutionalising the Right to Explanation, namely the article R. 311-3-1-2 of the CRPA, framed transparency as a form of successful intelligibility (my emphasis):

"The administration communicates the following information to the person subjected to an individual decision taken on the basis of an algorithmic processing, at the request of the latter, in an *intelligible form* and subject not to infringe confidential secrets by law:

- 1° The degree and mode of contribution of algorithmic processing to decision-making;
- 2° The processed data and their sources;
- 3° The processing parameters and, if applicable, their weighting, applied to the situation of the person concerned;
- 4° The operations performed by the treatment;"

This new right is powerful precisely because it acknowledges that transparency is a process not only of access to information but also of understanding. The algorithm is not just a so-called black box to open up: what needs to be produced is a curated and meaningful disclosure personalised to a citizen, in this case, the journalist Victor d'Aiglemont. The DGFIP will be accountable once d'Aiglemont will have a public justification of "the degree and

mode of contribution of algorithmic processing to decision-making”. To produce this framed and clear communication to a citizen requires the performativity of a demonstration that will secure a public justification of the algorithm components, procedurality and impact on the final tax amount. The scope of this demonstration is what will be negotiated during this scene. In order to apprehend this work of exhibition, DGFIP and Etalab started first to envision the potentially controversial components of the housing tax algorithm. Put differently, they mapped the limits of where transparency should be performed.

The key discussion stressing the political sensitivity of transparency concerned a number used as the first input of the housing tax algorithm: the basis of the calculus known as the “valeur locative brute” [gross rental value, VLB]. The VLB is determined by a large set of parameters such as the housing surface, the number of rooms, the type of bathroom and many other characteristics of the interior design. In short, it is a value specifying the quality of the housing, the theoretical annual rent that the property would be likely to produce under normal conditions.

On a pedagogical tone, Etalab’s strategic advisor Isidore Baudoyer explains to the DGFIP how the VLB was in itself already the output of another algorithm. It slowly appears to everybody in the room that we are in a situation where the input of the housing tax algorithm is the output of another algorithm. Baudoyer used the metaphor of the matriochka, these Russian dolls nesting of decreasing size placed inside each other: “the housing tax algorithm is the taller doll, the VLB a smaller one placed inside the housing tax”. According to him, if the VLB remains opaque, so does the whole housing tax calculus since the VLB is the main input of the overall calculus.

Etalab chief jurist Bixiou rightly noted that the VLB is not unpacked and documented in the four-page documentation the DGFIP hopes to make public. Here, Bixiou mapped the lack of information and the opportunity to fill

this gap with more accounts. As the VLB is the starting point of the housing tax algorithm for him it is crucial that citizens get this element clear before they try to understand more of the calculus. But DGFIP data administrator Taillefer was not sure if the VLB's processed data and modes of calculus needed to be unpacked as part of the "general information" to be given to a wide public or in any personal request made by any citizen — like the one from Victor d'Aiglemont. Note that since the Lemaire Bill came into force in the beginning of 2017, administrations using algorithmic decision-making systems have to declare them online in explaining their core functionalities: this is what Taillefer refers as the "general information". Bixiou was assertive in maintaining that the DGFIP has to make explicit the VLB in both the general and personalised explanations because as the law articles from the CRPA mentioned: a citizen can request that all the "processed data" used to calculate an algorithm be explained, including the input values such as VLB. Moreover, since the VLB is the core component of the tax, an understanding of its calculus is also necessary in the context of a "general information" given to a wide public.

This first *negotiation* between the two chiefs was centred on the temporality and quantity of disclosures: when should the VLB be explained (on a permanent general basis or when the administration is requested?) and how much should be exhibited (the input value influencing the whole calculation or the strict mechanics of the calculus?). Negotiating the limits of transparency is mapping when to make things public and how much should be disclosed.

This doubt from Taillefer about when to disclose the VLB has to be understood as a performance of not-knowing, a gesture to test the boundary of the legal interpretation, an attempt to negotiate with the device of the Right to Explanation. When Taillefer asked these questions, he performed a form of ignorance and this move exemplifies the role of *self-presentation* in transparency negotiation. In theatrical terms, ignorance is a performed script inside the process of negotiation. Regardless of whether Taillefer was capable of analysing



the legislation, Etalab's expertise needed to be acknowledged and DGFIP naturally needed Etalab's professionalism. Indeed, institutionally DGFIP was highly encouraged in consulting Etalab in order to have its plan of disclosures validated by the task force. Since Bixiou wrote the legal articles institutionalising the Right to Explanation and in a context where Etalab already intervened in public debates about the APB controversy, the advising role of Etalab was part of the institutional script and not going to see the task force could have been reproached to DGFIP. The natural disposition of each team was clear: Etalab was the stagehand, DGFIP the administration staging the need for advice. In doing so, accountability and transparency would appear as a progressive collective effort and as Baudoyer said, Etalab would have a "right to play" inside the theatre of transparency. The appearance of transparency as a collective effort would secure its appreciation as a thoughtful and solid response to the current algorithmic drama. In this enterprise, Etalab's skills were used as "protective measures [...] to assist the performers [here DGFIP] in saving the performers' show" (Goffman, 1959, p.187). This assistance was needed because the housing tax is regularly contested and demands for transparency difficult to meet.

Indeed, the potential risk of contestability was expressed by a jurist from the DGFIP that remained silent during the beginning of the meeting: "among the 30 millions of French tenants who pay the housing tax, 200 000 persons contest it every year". For him, the VLB is a key source of potential dispute since an overly high VLB will have a very strong weight on the final housing tax amount. He even said that in many cases the DGFIP directly gives some money back to the citizens without even going to the administrative court where the institution, according to the lawyer, will surely fail. What is dangerous for the jurist is that if you explain the VLB, many more people will wonder how their taxes are calculated because the documentation will give them the capacities to reverse-engineer the amount of the housing tax: errors will be pinpointed, incoherencies will arise. It is easy to understand that from DGFIP's

point of view, the documentation should not give the capacity to citizens to completely reverse-engineer their tax amount.

Thanks to the performance of this jurist, it is made clear that *transparency is selective*: it is a matter of distinguishing sensitive and non-sensitive information (Heimstädt, 2017). Here, the selection process is more an information reduction or omission than a curation of an excessive amount of knowledge. Following historian of science Peter Galison, we can say that “removing knowledge” is a way to create “framed secrets” and nurture a practice of “blocking things public” (Galison, 2005, pp.590–601). What is *negotiated* is the conduct of a selection process, the cut operating a division between what should and what should not be made public. This negotiation is performed with a rhetoric of risk and danger epitomising the *controversial* atmosphere under which transparency is practiced.

When risks emerge, they push actors to evaluate the moral quality of their actions, it reminds them that transparency will open a window on their activities and this in itself will trigger their “theatrical self-consciousness” as performers that have an agency in impressing audiences (Goffman, 1963). Nevertheless, in the meeting, the potential disruptions and risks coming with transparency were not demonstrated by DGFIP’s lawyer: he did not sustain his claim with examples or long discourse about the necessity of fiscal secrecy. The *theatre of transparency* might then also be a theatre of doubtful risks fed by an “algorithmic anxiety” (Seaver, 2017; Amoore, 2019). An anxiety experienced as a stigma of the *controversial mode* through which transparency is performed. As well summarised by Alberto Corsín Jiménez in his anthropology of public trust, this scene shows that “moral self-consciousness is externalized in the idiom of danger and instrumentalized in the politics of uncertainty and blame” (Corsín Jiménez, 2011:186). As we will see along the chapter, negotiating and scripting transparency are precisely happening in order to generate an uncertain algorithmic knowledge, partial disclosure and prevent the blame coming with

contestability — especially since disclosed information is used by journalists and citizens as a “blaming-resource” to reclaim accountability and point to responsible parties (Corsín Jiménez, 2011, p.187).

Seated in front of the DGFIP’s lawyer, Baudoyer nervously responded to him: “In the Bill for the French Digital Republic there is no exception for non-openness because of political sensitivity”. Remember, that articles from CRPA are applications of the mentioned Bill. In a way, this jurist seemed to admit that the way the DGFIP calculates the VLB is messy, arbitrary and possibly unfair. For Baudoyer, the risk of contestability is not an excuse for not being accountable. The lawyer and his chief concede that the central problem the DGFIP is facing is that they are not able to trace the path of how the VLB has been calculated. They gave three reasons for that: each value is locally defined, plus they have been defined in the 1970s and stayed in constant evolution since then. In other words, the housing tax calculus is local, old and recursively reordered.

Every VLB is geographically different and therefore has a different calculus. For example, in big metropolises such as Paris, it is more closer to a fixed rate, but in smaller cities it can be different depending on the district. To unpack a personal VLB is a tremendously challenging task for DGFIP. The constitutive elements of the calculus are defined by various institutions at both regional and national levels, and these institutions rely on a bureaucratic system inherited from the past, moreover some parameters are also changing every year. To put it differently, the key input value of the housing tax algorithm is opaque because it relies on an old but still living infrastructure, a residue of the state fiscal archive. As rightly noted by political geographer Louise Amoore, our critical concern should not be on the algorithm’s unity and stability but on its continuous transformation and rewriting: “In sum, the root of harm is not the authorial source code but predominantly the way the algorithm is written and how it writes itself — continuously editing, adjusting, removing, and iterating in relation to a corpus of data” (Amoore, 2020, p.97).

The tentacular character of the housing tax global system works against the pretension to reify it as a single “algorithm”. Analysis from infrastructure studies have shown that the centralised power of the State comes from its capacity to collect and process data without the citizen’s consent (Mann, 1984). This power is experienced by citizens as a radical complexity: the incapacity to represent all the connections in a complicated algorithmic system composed of tenants, their tax letter, the declarations made by landlords, regional fiscal legislations, parameters decided nationally by the Parliament, and in fine technologies of calculation. For Paul Edwards, the *eminence grise* of infrastructure studies, individuals “have been assimilated” into the radical otherness of such algorithmic bureaucracy: “we now live in a world governed not by algorithmic systems per se, but rather by interacting ecologies of algorithmic systems, human individuals, social groups, cultures, and organizations“ (Edwards, 2018, p.23).

These incommensurable interactions between each type of housing declared by landlords, each different local modes of calculus of the tax paid by tenants, each personal situation of the tenants (revenues, number of children, etc.) and the regulations from central authorities (DGFIP and the National Assembly) are creating the effect of opacity. An opacity that is not so much due to a cover but generated by a complexity of relations and a fragmentation of participants to the calculus. Following Louise Amoore (2020, p.100) staying and working through this algorithmic trouble is to acknowledge the many writers of the system iterating “beyond the moment of its inscriptions” and the force “distributing the writing through multiple characters.”

By operating through desynchronisation — an experienced feeling of disconnection between the tax amount and the processed legal and fiscal paperwork in the background — an infrastructure such as the housing tax algorithm threatens common understanding. What the DGFIP jurist is afraid of

is the potential incoherence between all the frail administrative layers a citizen can discover. As pointed out by anthropologist Agnieszka Joniak-Lüthi: “Understanding that every infrastructure is an asynchronous timescape indexes the inherent fragility of a connectivity that can only emerge when these multiple temporal relationships are, more or less successfully, synchronized in the work of construction, maintenance and mundane utilization” (Joniak-Lüthi, 2019, p.7).

In short: the decision made in the 1970’s and setting the VLB cannot be synchronised with the contemporary housing situation, there are too many gaps and branches to follow and describe in this algorithmic infrastructure. It would require breaking the unity of the housing tax and for one to “consider algorithms to be arrangements of differential traces (qua texts)”, and according to Amoore, only this vision would help us in opening a “different way to imagine the ethicopolitical contexts of algorithms” (Amoore, 2020, p.104).

To summarise, in this scene we have seen that the discussion between the DGFIP jurist and Etalab strategic counsellor is a key moment to understand the dangers of transparency. What has been negotiated is the temporality and quantity of disclosures, the “when” and “how much” of demonstration and justification would need to be performed. This negotiation was in itself a process of selection performed through the ignorance of the State infrastructures and legal instrument of the Right to Explanation. I argue that this ignorance is a *performed script* to orient the direction of the negotiation. Conversely, at other moments of the meeting we will see in action the negotiation of the scripting process.

The critical juncture in negotiations come from this paradoxical situation: the algorithm has an effective power of running the housing tax system but its opacity does not cause visible functional problems — except 200 000 people claiming for unfair tax amounts, which for DGFIP seems to be

negligible since they directly reimburse unsatisfied tenants. Consequently, from the DGFIP's point of view, we can imagine that there is no strong rationale to make the system more accountable, except legal obligations to respond to FOIA requests, but unfortunately, there is a lot of chance that the risk of sanctions for unaccountability will not be high enough to proceed to complex regulation willing to make the calculus fairer. If DGFIP did not respond to Victor d'Aiglemont there is no automatic punishment, in order to continue to claim for more accountability the journalist will be obliged to send a request to an administrative court.

In this context, if full accountability is impossible due to the tax infrastructural complexity, under which conditions could transparency still be useful for DGFIP and Etalab? I will argue that rather than constituting an obstacle for the achievement of transparency, the opacity of the housing tax caused by the VLB will trigger and feed particular ways to script it. As I started to explain, the *self-presentation* of experts and the way they interpret the regulation are the performative mode through which transparency is made *selective and decoupled from accountability*. Paradoxically, the intrinsic opacity of an algorithm is the very condition under which transparency is possible. What DGFIP and Etalab will envision then is the positivity of opacity. As we will see in the next section and in the following chapter, opacity opens up a creativity on how transparency could be otherwise practised: an excitement nurturing innovative formats of transparency performances.

### Scene 3. Scripting algorithmic transparency.

At this moment of the meeting, Michel Chrestien, in charge of “performance and risk management” at DINSIC entered the room. His fleeting presence was justified to discuss the risk of security breaches that a disclosure of the housing tax source-code could generate. Chrestien and Etalab data scientist Rabourdin reassured DGFIP that if it was necessary, the National Cybersecurity Agency of France (ANSSI) could be consulted to anticipate potential security risks. I suspect that the Etalab team invited Chrestien in order to block any attempts by DGFIP to claim that a disclosure was dangerous for the integrity of State security — if my intuition is correct it could be a possible scripting of the negotiation, a construction of the context where algorithmic transparency is discussed. Indeed, as Etalab Chief lawyer Bixiou explained to me, during the negotiation for the adoption of the Lemaire Bill many administrations used the argument of security risks to express their disagreement with the regulation — is there a theatre of cybersecurity inside the theatre of transparency? Anyhow, the appearance of a new character occasioned a short discussion on cybersecurity and operated a transition from the negotiation on transparency limits to the scripting of audiences’ responses.

Since the process of disclosing requires an evaluation of the tax system and an analysis of how the Right to Explanation can be used as a transparency device, this meeting was necessary for strategic planning. Indeed, a key technique used as an attempt to avoid contestability was to *script* the way citizens used their rights, a strategy where the interpretation of the CRPA articles is key and a job where Etalab has expertise. In other words, the Right to Explanation becomes the device of transparency negotiation. In this section I am going to delineate two interrelated dimensions of scripting transparency: the *anticipation* of potential contestation and the proactive attempt to *plan* how and when the Right to Explanation will be used.

In explaining law articles from the CRPA, Bixiou gave two pieces of advice to the DGFIP that could help the administration to tackle this “trial of explicitness” (Muniesa, 2011) about how the local calculus of the VLB is affecting the overall housing tax amount. First, in explaining the housing tax components, Bixiou proposed to DGFIP to not give an explanation of the VLB to Victor d’Aiglemont, in doing so, he considered that this value is not an internal “processed data” but an external data input, in doing so d’Aiglemont will be obliged to do a second request to ask information only about the VLB. Etalab’s lawyer made clear that on his point of view the interpretation he gave of the regulation was different from the spirit of the law — and different from what Etalab wished — but was nevertheless possible. Following Goffman, the *selective transparency* is scripted to “prepare in advance for all possible expressive contingencies” (Goffman, 1959, p.145). Put differently, the prescription of how to perform transparency may orient the conduct of contestations. Indeed, forcing a citizen to do several requests slows down the process of transparency enactment. In this way, the temporality of transparency performances will be characterised by long delays between the requests and its responses: transparency is used as a “narrative structure entailing time” (Strathern, 2000:310).

Following a classical ANT sensibility, we could say that the *scripting of transparency* sets the how and when of disclosure and witnessing, which is the political script of what “actors are doing to one another” (Akrich and Latour, 1992, p.259). In my case, the device of the Right to Explanation is an instrument to orient and manage for the journalist Victor d’Aiglemont the borders of the algorithm appearance. In this context, the Right to Explanation is not oriented towards accountability but used for impression and visibility management (Flyverbom, 2019, drawing on Goffman, 1959).

If DGFIP does not wanted to follow Bixiou’s advice, the other more costly alternative is to personally explain how the VLB has been personally



calculated for d'Aiglemont — but we have seen that this is impossible due to the infrastructural complexity of local fiscality. In proposing that the VLB is not part of the housing tax algorithm, Etalab's lawyer *performed the unity* of the housing tax algorithm. In the scientific *theatre of proof*, one of the techniques to produce credible matters of fact is to perform the material integrity of the object of demonstration (Shapin and Schaffer, 1986, pp.29-30). Similarly, performing the unity of the housing tax as an algorithm was a way to simplify the explanation of the calculation against the complications of the opaque VLB, an occasion to discard the controversial information and to show that the fiscal and algorithmic engine was not leaking. Here, *scripting transparency* is playing with the ambiguity of FOIA demands in a context where the ontology of the housing tax algorithm is unclear. Along the same track of analysis, in his study of Open Data disclosing methods in the cities of Berlin, London and New York, organisational sociologist Maximilian Heimstädt (2017) identified that one of the core techniques of “openwashing” used by agencies was to publish data under their own legal and technical interpretation of accessibility.

The legal interpretation performed by Bixiou then became an imagined story framing the borders of the housing tax algorithm. Using the vocabulary of Louise Amoore, we can say that Etalab's jurist “fabulated” the algorithm's integrity as a way to strategically hide its heterogeneous and incommensurable elements: “Yet, this is precisely the paradox of the process of writing, of fabulating a text. The writing of the algorithm fixes a unity from scattered data elements, at that same moment fabulating new connections and traits, forging attributes that will attach to other beings in the future” (Amoore, 2020, p.103).

This fabulated interpretation of the regulation wants to guarantee the integrity and unity of the housing tax algorithm in front of possible uncertainties. In short, Bixiou rewrote the story of the housing tax algorithm. Following a classical STS analysis, the controversial technology becomes a text (Woolgar, 1991) or a dramaturgical character (Pfaffenberger, 1992) socially

sustained by a discourse that regulates its interpretation: the algorithm “resembles a literary genre, in which a text’s meaning changes as it falls into new hands and new situations” (Pfaffenberger, 1992, p.284). To avoid any misunderstandings: I do not mean that algorithms are *just* texts and do not have a material reality, but in my situation, what matters is how the housing tax algorithm is *staged* in discourses in order to prevent outsiders to question the algorithmic decision-making of DGFIP.

If now I position this staged algorithm in the more general “cultural logic of computation” (Golumbia, 2009), it strangely oscillates between a “metaphor” pointing to a complex State infrastructure and a “means” to describe the procedurality of bureaucracy (see Hayles, 2005, pp.17–19 and for a discussion; Tkacz, 2015, p.140). So far, we have seen that the housing tax algorithm is seen as a *post-digital* entity since it points either to an infrastructural assemblage, a rigid calculus or a mathematical formulae disconnected from a programming code. It means also that there is a moment where actors ceased to consider the housing tax algorithm as a source code to be opened because it is not the most efficient way to make it legible for the lay citizen. Nonetheless, in the next chapter we will see that this source code will still be disclosed. But in this meeting, actors acknowledged the distributed and vaporous nature of the reified “algorithm” and they searched solutions for the settlements of contestations. They find solutions in discursively staging the algorithm.

If the algorithm is then a figure (Ziewitz, 2017), and if Bixiou’s performed interpretation orients the future conduct of transparency, we should therefore be sensible of the fact that the material-semiotics of algorithms is a battlefield where citizens will have to invest in the “discursive nature of resistance to technological domination” (Pfaffenberger, 1992, p.285). In order to claim accountability, the journalist Victor d’Aiglemont will have to intervene and display alternatives description of the housing tax as an algorithm impacting its

tax amount. Ultimately, what this scene shows is that the negotiation and scripting of transparency is inherently *discursive* and *social* since it necessitates a legal knowledge performed by a lawyer. While the data rights and FOIA methods are often understood as strict rule-based scripts, an ethnography of transparency negotiation describes the performativity of the social at the heart of algorithmic politics as well as the rhetorical fight for the stabilisation of contested technologies.

Since questioning the VLB is an attempt to “recover the dimensions of decontextualisation” (Strathern, 2002, p.310) attached to the abstract conception of the housing tax, and since the algorithm exceeds itself and points to many ramifications, there is a lot of chance that no matter how strong the demand for transparency is, the Right to Explanation will not exhaust all the algorithmic contexts. In other words, the limits of the Right to Explanation are caused by the “nonclosure” and “excess” of algorithmic contexts (Amoore, 2020, pp.105-106). While the demand from journalist d’Aiglemont needs to be made and settled, as a transparency device the Right to Explanation expands the borders of what should be made intelligible. According to Harvey et al., this never-ending quest for exegesis is what constructs transparency as a performance able to produce partial accounts that will nevertheless appear credible: “These [transparency] devices enact dynamic self-perpetuating systems which, while needing to make certain things explicit in order to secure technical settlement, also constantly push the boundaries of the explicit. From this perspective uncertainty can become a source of their authority and legitimacy rather than a sign of their failing” (2013, p.304).

After the discussion on the VLB, Bixiou also gave a second piece of advice closer to an overall strategy: “the more the general information is of a good quality, the less you will have individual requests”. In other words: to avoid contestability, DGFIP could give a broad understanding of the calculus without showing the details of the VLB. If this general information is mandatory, the

individualised explanation to a citizen is necessary only if, like d'Aiglemont did, they request it. Anyhow, the fact that Etalab chief jurist gave this advice shows again how it is possible to compose with the regulatory context and use it as a device to orient the way citizens will use their rights to request.

Consequently, in this scene we see that *scripting transparency* is set up to anticipate future accountability failures (Harvey, et al., 2013). It is a way to provide a spatio-temporal stage to anticipate and plan the act of self-description constituting transparency: the types of self-description that will orient in return the types of exegesis, interpretative labor and capacities for citizens to contest and request some information in return. The act of self-description is strategic in the sense that you can manage the scope of your disclosure and the way clues make things more or less explicit. At the end of the process this is a way to shape the way citizens practice and experience transparency as an effect of a device such as FOIA requests. In this process, opacity is a resource to order the boundary of what will be made intelligible.

For anthropologist David Graeber, bureaucratic complexity is insidiously violent because it often takes the form of mundane, opaque and arbitrary administrative decisions lacking the more visible physical violence of armies or police forces (Graeber, 2015, p.66). The violence of bureaucracy rests upon its incapacity or its will to not permit the interpretative labour required to understand an administrative decision (Graeber, 2015, p.69). Consequently, preventing an interpretative labour is why transparency needs to create an incapacity to make sense of the full working of the housing tax. Here is the silent algorithmic violence of dry, boring and undesigned tax letters — a violence that a few months after the meeting, the “Gilet Jaunes” movement will respond to since fiscal justice was the initial motivation of the massive protests.

The scripting of transparency was possible because DGFIP trusted Etalab's expertise in interpreting the regulation. To have an authority and

become a trustworthy professional strategist of transparency, actors needed to demonstrate their skills. This is also what John Law conveys when he witnessed impression management practices of top managers at the Daresbury laboratory: “Trust? What is this trust? They trust each other like a bunch of predators! But this is the point: they are predators that have to live with one another.” (Law, 1994, p.179).

Expertise is performed in order to envision how to practice a transparency that would pacify contestability. As a response to algorithmic controversies, many transparency advocates are currently invested in building a so-called “trustworthy AI”, however, this scene shows that it is the mutual trust between practitioners that will solidify the appearance of the housing tax as a unified and trustworthy algorithm. The advice Bixiou gave to the DGFIP to skirt full accountability of the housing tax algorithm reveals the profoundly ambiguous position of Etalab: while its apparent commitment to “openness” and “transparency” conveys a sense of loyalty to the citizen, institutionally the team’s mission is to support administrations in their actions. The task force is *staged* through an oscillation of concealment and revelation: it is used for intelligence gathering and the backstaging of information, as well as to orchestrate disclosure. Etalab members may be attracted by the positive dogma of transparency but do not always have the political legitimacy, space and opportunities to make it a powerful tool that does justice to accountability. This inconsistency shows that they do not have the bad intention to not deliver accountability (on the contrary!) but in a mundane meeting their moral commitment is overtaken by the weight of their institutional affiliation and mission at the service of administrations. The next scene will present another attempt by DGFIP to negotiate transparency. Again, the stability and reality of the housing tax *as an algorithm* will be debated.

#### Scene 4. Negotiating the ontology of the housing tax

In this scene, a new actor seated at the left of Jean-Frédéric Taillefer entered the play: Flore Brazier, the chief of the bureau in charge of calculating the housing tax. She asked Bixiou to clarify if the housing tax was an algorithm or not. At this stage of the discussion, asking such a question was highly disruptive: is it not clear enough that the housing tax should — according to the French administrative law — be considered as an algorithm? At the same time, the discussion was not organised around a strict agenda of topics to address in any particular order. The negotiation and scripting of transparency was then performed as a day-to-day activity that did not have a formal protocol of discussion.

The question from the fiscal officer was direct, dry, without hesitation. It felt just as if she risked something. Her move seemed like a trial: to question the ontology of an algorithm in her ministry has to be understood as a tactic to escape accountability. Indeed, if Etalab were not able to name and locate the use of an algorithm, the DGFIP could thereafter claim that the calculus performed by her team did not fall under the new regulation.

We were not in a situation where Bixiou could decide once and for all DGFIP obligations. The only institutions that can legally determine the ontology of an algorithm are the Commission of Access to Administrative Documents (CADA) or an administrative court, and only if a request is made by a citizen to these organisations. It means that when a French person directly asks an administration some explanations about a particular algorithm, civil servants just like Flore Brazier have to first figure out if an algorithm is present or not in the institution. At this stage of my inquiry, this determination strongly relied on the interpretation of the CRPA articles by internal legal services of administrations. Later the specification provided in the “Public Algorithms

Guide” Baudoyer and I wrote would help administrations in this complex appreciation. But at the time of the scene, such Guide was not yet written. In that scene, neither Etalab nor the DGFIP had to prove the existence or non-existence of an algorithm, they just needed to be convincing through their performances, and this is why I insist on the theatrics of transparency-in-the-making and the politics of expertise where legal knowledge is highly important.

When writing the CRPA articles aiming at regulating public algorithms, Bixiou told me he had in mind the “usual” definition of an algorithm from the dictionary. We can find such definition in a report on algorithmic transparency from the Commission Nationale Informatique et Liberté (CNIL), the defender of online civil liberties, in which it is said that an algorithm is a “description of a finished and unambiguous sequence of steps or instructions used to obtain a result thanks to elements provided in input” (CNIL, 2017, p.75). During the scene, Bixiou convincingly reused the definition from the CNIL in order to maintain that the housing tax is an algorithm. But this was not sufficient to counter the embarrassing atmosphere installed by Brazier’s question. He then added: “from the moment when there is a sequence of automatic calculation (without human intervention) this is an algorithm.” But as I explained earlier, contrary to the GDPR, the French regulation is applicable even if the algorithm only helps in a decision-making process involving the intervention of civil servants. Taillefer still tried to contest: “I don’t get it, now it seems like everything is an automated decision”. In order to summarise this negotiation through an ethnomethodological parlance we could say that the two teams were fighting for the definition of the situation: are we facing an algorithm or not? Is paying your tax an algorithmic situation? Finally, Bixiou succeeded to get Taillefer to admit that since the housing-tax is a massive calculation process concerning 30 millions of French tenants, it is quite evident that the calculus is made automatically.

Through this discussion, we understand how the algorithm is a *theatrical character* with multiple figures. Depending on how they are staged, their *mise en scène* could orient the conduct of transparency in different ways. While the definition from CNIL inherits from computer science, it does not specify if the algorithm should be instantiated through computational technologies or not. In a way this is a *post-digital* definition disengaged with questions of materiality and renewing with the pre-modern definition of an algorithm: a recipe. In doing so, the *post-digital* algorithm could then be a “means of contesting and critiquing the derangement and reassembly of knowledges through computation” (Berry and Dieter, 2015, p.4). Indeed, considering the housing tax as an algorithm “out of the digital” or as an infrastructural assemblage is an intervention foregrounding the many entities participating in its calculus, be they human or non-human, technological or not. Naming and counting these many entities would not have been possible in considering the housing tax algorithm as lines of programming code in a software stack.

But in using an algorithmic language, this *post-digital* staging may also participate in the regularization and naturalisation of seeing things through an algorithmic logic. Following Nick Seaver, we could counter this digital formalism in saying that: “there is no such thing as an algorithmic decision; there are only ways of seeing decisions as algorithmic” (Seaver, 2018, p.378). Thereafter, *staging* the housing tax as an automated calculation was therefore reintroducing an agency of the digital into the process of calculation. In doing so, Bixiou closed the debate on the figuration of the system, re-signified it as a digital algorithm and re-dramatise the debate in using the threatening discourse of automatisisation.

The power of the legal qualification to create entities such as an “algorithm” and the fact that it has an authority Bixiou does not need to justify comes from the performative effect of the regulation: its capacity to link



administrations with an obligation, its propensity to create the mandatory label “algorithm” necessarily to be now found in the contingency of administrative decision-making processes. In his legal anthropology Laurent de Sutter pointed to the ontological power of legal qualification in creating entities and transforming actors: “The necessity of an obligation is not practical, but poetic: the obligation *does* something — something which is only part of its own movement, and which causes, without possibility of return, a new state of being to the [actors] obliged. The necessity of an obligation belongs to the domain of ontology: it is a necessity which concerns the very definition of the being of the parties to the convention” (Sutter, 2015, p.71).

By naming the algorithm as an entity, the regulation redefines the “reality” of administrative decision-making and forces actors to rethink the way they label their practice. The necessity of the legal obligation is not in its object but in its capacity to have effects in reality: the capacity to make things happen (Sutter, 2015, p.71). A “provocation” with a productive and transformative force as I argued in the previous chapter using the work of the sociologist of devices Fabian Muniesa (2014). By adding a new entity, the regulation as an instrument of transparency forces actors such as the DGFIP to make a pause and envision where the algorithm is and what is algorithmic. It is a naming process that redefines and reconfigures. Nevertheless, in performing the unity of the housing tax as a system untouched by the opaque VLB, DGFIP do not want to see transparency as a conflicting and unanticipated form of actualisation (Muniesa, 2011, p.2). The DGFIP team prefers orienting the *provocation* mode of transparency towards simplifying the ontological status of the housing tax rather than questioning its real mode of calculus.

The troubled ontology of administrative procedures and the terminological vagueness attached to algorithms is creating a powerful and attractive ambiguity about what is or could be an algorithm. This definitional blur is causing anxiety because the different experts around the transparency

table of negotiation were not aligned on their version of what is an algorithm. As anthropologist Nick Seaver proposed: “our worry about what ‘algorithm’ means has more to do with our positions vis-a-vis other groups of experts than it has to do with our ability to correctly match terms and referents” (Seaver, 2017, p.2).

When Flore Brazier, a public finance expert part of DGFIP, is not sure of what an algorithm is, she is performing ignorance and incompetence. This gesture is a possible performed *script* to intervene and orient the *negotiation* process — it has a strategic function. While not-knowing is performed it is likely that she could perfectly describe more than anybody in the room the housing tax components, data, modes of calculus because she is working at the Ministry of Public Finance, namely in the bureau dedicated to the “applications of tax base and forced collection of personal taxes — Management of housing and property taxes”. She was surely able to produce a localised vision of the housing tax. But what is possibly happening is that when algorithms are collective products dependent on an incommensurable infrastructure such as the housing tax or music recommendation systems as studied by Seaver: “everyone felt like an outsider to it” (Seaver, 2017, p.3) or everyone can have the opportunity to perform a not-knowing since the algorithm infrastructure is virtually too big and complex.

Months after this meeting, Baudoyer said to me that such attempts to demonstrate the absence of algorithms in administrations was now a known theatrical move for him. Moreover, a jurist member of CADA and CNIL also explained to me that many French administrations tried to escape the GDPR regulation in inventing fake human intervention taking part in an actual fully automated decision-making — the European legislation is not well suited to regulate semi-automated decision-making. As I argued in the previous chapter, this difficulty to circumscribe algorithms comes from the lack of a clear legal definition of what is an algorithm. And as I explained in the previous scenes, it

comes from the fact that algorithms always overflow, once we closely scrutinize them they prove to be evasive multiplicities.

In order to script transparency, a form of performed ignorance or incompetence is the *staging technique* used by a civil servant to negotiate the ontology of an algorithm and if the regulation should be applied or not. Inside the theatre of transparency, staged ignorance opened the door for Etalab's advising role. The same type of performance has been used in the previous scene by Taillefer when he was not sure in which situations the VLB should be unpacked. I argue that there is a strategic importance of not knowing. What I would like to envision is that DGFIP did not come to Etalab in order to know more about algorithms and accountability, but came to know what they should not know in order to perform a "just enough" transparency.

The ignorance performed by this senior civil servant is a protection. Algorithmic accountability could therefore be prevented by having a distance to algorithmic knowledge. In this context, the maintenance of opacity and secrecy is not primarily secured through voluntary and tactical information retention but thanks to a distancing from information possibly important for the achievement of accountability. Similarly, in a contribution to the sociology of ignorance, organisational ethnographer Morten Knudsen identified forms of inattentiveness and blindness protecting actors from communicating potentially destructive information (Knudsen, 2011). American sociologist Erving Goffman would have described the performed ignorance as a "tact in regard to facts" (Goffman, 1959, p.147). Along the same line of inquiry, in his analysis of the NGO Transparency Initiative, ethnographer Andrew Barry stated that an act of withdrawal from organisational realities is part of "the realm of what one chooses not to know, does not investigate, or deliberately overlooks" (Barry, 2010).

Following these inquiries, I would say that internal ignorance of algorithmisation by administrations is what nurtures the formalisation of the housing tax as a public secret (Taussig, 1999) namely, a system that is knowingly opaque while being partly visible but not yet well aligned to accountability requirements. In his anthropology of public secrets anthropologist Michael Taussig said that they obtain their strength when actors succeed in “knowing what not to know” (Taussig, 1999, p.2). Having full accountability of the housing tax is not only impossible, but if it was possible it would be destructive, therefore producing a *selective* transparency maintains the borders of the housing tax as a “publicisable” secret. Consequently, the paradoxical empiricism of the *transparency theatre* produces partial matters of fact tailored for publicity. Since most average French tenants already knew the housing tax was visibly opaque — as a public secret — the scripted transparency will maintain the system in this state.

This scene displayed something unusual for the conduct of transparency: Brazier, a senior civil servant asked a senior jurist, in this case Bixiou, to label, delineate and give an account about her work. Algorithmic transparency-in-the-making necessitates to objectify and materialise how an algorithm is weaved with administrative procedures: it is a process where reflexivity is required since reflexivity will help to produce an adequate self-description and honest accountability. Brazier’s move could be understood as an attempt to out-source or delegate to Etalab the reflexivity she is supposed to provide on her service. This is why her move seemed suspicious. Self-description and reflexivity are two mandatory steps towards true accountability: there is no transparency without a capacity to give an account and describe an administrative algorithm.

Consequently, in asking Jean-Jacques Bixiou if the housing tax is an algorithm, the delegation of reflexivity is an action serving the theatrics of transparency and the separation of roles between the stagehand and the

administrations. Months after this meeting, Victor d'Aiglemont told me that it was problematic that administrations could not deal with FOIA requests on their own, for him this type of consulting meeting constituted an overwork for Etalab. But no matter what d'Aiglemont was thinking the task force was seen as the legitimate actor thanks to the OGP commitments and its proactive role in drafting the first version of the regulation.

For the journalist, the delegation of reflexivity is problematic as it could be interpreted as an attempt to delegate the difficult task of description and a possible withdrawal of responsibility from administrations that are normally obliged to achieve accountability. Consequently, in scripting together the enactment of transparency, Etalab and DGFIP blurs the allocation of responsibility: who is responsible for the scripting of disclosure? Who will be visible and may suffer from a blame if the disclosure is not adequate? Anticipating contestability as it is organised in this meeting is also anticipating how the blame can be used as a way to re-attribute and point to who must be responsible (See Douglas, 1992, p.19, discussed by; Corsín Jiménez, 2011, p.187).

After this interruption by Brazier that had the virtue of clarifying the status of the housing tax as an “algorithm”, the discussion finished on the negotiation of transparency dramaturgy. Since full accountability is impossible and since transparency must be scripted, what adequate discourse could sustain the partial disclosure of the housing tax? Here is the subject of the next scene.

### **Scene 5. Negotiating and scripting exemplarity.**

As we have previously seen, if the accountability of the housing tax is not possible, how DGFIP and Etalab still hope to perform transparency? I responded to this question in showing how transparency was selective,

anticipated, planned, configured, in one word: scripted. This last scene gives another response: transparency requires a dramaturgy that will accompany disclosure. This dramaturgy of transparency takes place through a *negotiation* where Etalab try to obtain from DGFIP a commitment to achieve legal obligations coming with the Right to Explanation, in doing so, the task force promise that DGFIP will appear exemplary. This promise is in itself a form of *scripting*, a prospective vision of how organisations could use transparency and appearance as political forces.

In a meeting preparing the encounter with DGFIP, Baudoyer said that Taillefer wanted to continue to appear exemplary because the DGFIP has already published in 2017 the source code of the income tax calculator<sup>42</sup>. Baudoyer said “DGFIP is one of the first administrations to have developed such disclosing practice” but he exposed this fact just as if this publicity had been made voluntarily. Here it seems that the strategic counsellor obviated or forgot to mention Birotteau’s litigation with the DGFIP. In this section I will develop the idea that the dramaturgy of transparency-as-exemplarity is scripted for pacifying the relations between administrations and citizens — I point I will come back to in the next chapter.

The preliminary meeting constitutes for Etalab a strategic moment to plan and script the position and discourse the team will adopt during the meeting with DGFIP as well as during public performances where the task force will have to demonstrate its ability to tackle the issue of algorithmic transparency. This preliminary meeting triggers theatrical self-consciousness. It is a prelude and a rehearsal to the negotiation and planning of transparency management, a talk about the talk (Goffman, 1959, p.176), a scripting of the transparency scripting so to speak. What surfaced in this early meeting is the central idea that performing transparency could transform the image of

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42 - See the announcement by Etalab: <https://www.etalab.gouv.fr/ouverture-du-code-du-calcul-de-limpot-sur-le-revenu> (Accessed on 13 July 2020).

administrations and brand them as exemplary organisations committed to the democratic value of transparency. The Etalab team thought that the legal obligations were not sufficiently constraining, indeed, the legal sanctions for not respecting these obligations are not mechanical. If DGFIP does not respond to d'Aiglemont's request, he is obliged to request an administrative court. Moreover, during a morning break at Etalab's cafeteria the data scientist Célestine Rabourdin told me: "The DGFIP wants to shine, they want a press release, an event to deliver the code." Using the concept of exemplarity was then also a way to nurture DGFIP's wishes to show off.

During the actual meeting between the two teams, it was Etalab's strategy to flatter Jean-Frédéric Taillefer. Bixiou performed tactic was to say that if the DGFIP wants to be exemplary they must develop the four legal obligations present in the regulation, I quote him: "You need to publish the housing tax source code; add an explicit mention on every housing tax letter notifying that an algorithmic treatment has been pursued to calculate the amount; publish general information about the algorithm; and personalise a response to Victor d'Aiglemont".

As a performer Bixiou followed the script the team had validated in the preliminary meeting. Thanks to this early reunion, Bixiou performed clamly calm and prepared himself for unexpected events. Following Goffman, he performed a dramaturgical loyalty to his peers: "It is apparent that if a team is to sustain the line it has taken, the team-mates must act as if they have accepted certain moral obligations" (Goffman, 1959, p.135). The moral obligation in this case was to follow the script and narrative about exemplarity with a dramaturgical discipline: "It is crucial for the maintenance of the team's performance that each member of the team possess dramaturgical discipline and exercise it in presenting his own part" (Goffman, 1959, p.136).

Bixiou said to Taillefer that if these four requirements are fulfilled, making the housing tax algorithm transparent will be an “exemplary pilot project”. For Etalab, the meeting was an attempt to convince the DGFIP to create a collaboration in order to fulfill the first OGP commitment: “produce 5 monographs on public algorithms to identify issues in technical, legal and organisational terms. Involve civil society in this study”. The housing tax could be the first case study for a monograph. The dramaturgy of exemplarity explains why the theatre of transparency is not necessarily created for more accountability but for the purpose of innovation and competition, aiming to stay well ranked as a transparent State in front of other state members of the OGP. Following organisational scholar Haridimos Tsoukas, what is managed here is the capacity for Etalab to fulfil his plan of action “instead of the management of the original problems that the system was set up to deal with [opacity and unfair algorithmic decision-making]” (Tsoukas, 1997, p.833).

This scene thus shows the attempt of Jean-Frédéric Taillefer and Jean-Jacques Bixiou to make a deal. In this latent contract Bixiou wanted to propose that if the DGFIP obeyed the fourth obligations, the organisation would appear estimable and Etalab would have a case study to publicise. This promise of a future pride is a scripting. I would add that achieving transparency will not only be only a guiding project but also a test, an experiment in the theatre of transparency, an occasion to perform Etalab and the DGFIP’s success and commitment to innovation. A win-win situation where transparency could then be traded to secure exemplarity. As Laurent de Sutter points out, the labour of developing legal obligation could be shared: “the [legal] *obligatio* was a thing; it was a reality, even though this reality might seem evanescent in comparison with the material reality of people and objects; it was one thing, and so could be processed, manipulated, even exchanged like anything else” (de Sutter, 2015, p.48).



The "just enough" transparency produced with the help of Etalab could be exchanged for more exemplarity. Because, we are in a situation where the DGFIP does not risk strong legal sanctions, except a form of public shame, the legal obligation could be oriented in different directions and traded for the pride of innovation. In this trade, transparency is more a currency to be given for more publicity and innovation than a genuine gesture towards the enhancement of accountability. Said differently, the scripting of the exemplar performances is ordered by the impossibility of securing accountability, a form of opportunism coming from the pressure to innovate, and an attention to influence networks outside of the organisations in order to be identified on the map as a progressive actors. Exemplarity could be envisioned, nurtured and scripted precisely because impression-management requires this type of meeting: a personal and informal "unroutinized" event (Law, 1994, p.17).

This shift from moral commitments to their instrumentalism, from transparency to innovation, and from the need to help in the achievement of accountability to the pride of rankings echoes an earlier shift occurring in 1990's audit cultures studied by anthropologist Marilyn Strathern: "We have to appreciate that the very process that is known as 'objectification' [the performative effect of indicators instituting what they audit] is in effect a translation across domains — in this case, from service to assessment. The local authorities see this very clearly when they aim for high scores. The language of indicators takes over the language of service. Or, to return to the audit process, the language of accountability takes over the language of trust" (Strathern, 2000, p.314).

Strathern means that the aim and duty of a service is forgotten in the quest for performance, in this process the audit device is adding a self-referential layer of accounts disconnected from local codes of trust between practitioners, the ones coming with experiential and implicit interactions (e.g. respect, tacit knowledge). For administrations, the goal is not anymore or not

primarily to develop a service satisfying users or citizens but to have “high scores”, performance indicators and a good position in rankings. To analyse this shift in registers, in her article Strathern borrows an example originally presented by Tsoukas: “Imagine, for example, the case of a council in which elderly residents would rather have a deep freeze and a microwave than have their food daily delivered to them by home helps. ‘If the authority responds to what people want and cuts down on home helps it will look terrible in the league table, which merely asks how many home helps there are per thousand of population. It could be tempted to abandon its policy and hire more home helps simply for the sake of appearances’<sup>43</sup>. The paradox here is that a system invented to make councils more responsive to their citizens, may actually achieve the reverse. The more elderly residents demand a bespoke solution to their demands for daily food the more a council is likely to respond by using home helps (that is, by not meeting their demands)” (Tsoukas, 1997, p.838).

In my case, the tyranny of transparency is ordered by an opportunism visible when through the OGP commitments the language of innovation and experimentation takes over the language of transparency, and also present in this meeting where the language of exemplarity takes over the language of accountability. I argue that these transformations of registers contribute in situating transparency as a political practice of contestability pacification where the publicity of innovation and experimentations are a cover to hide the incapacity to provide a full accountability. These shifts were prepared in the preparatory meetings and as I said in the previous chapter through Baudoyer’s wish to obtain for Etalab “a right to play” in the theatre.

Unfortunately, during the meeting, when Bixiou proposed this narrative of exemplarity, Taillefer seemed deaf to it. He did not get excited about being positioned as the leading administration in terms of algorithmic transparency.

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<sup>43</sup> -Here Tsoukas is quoting Margaret Hodge, vice chairman of the association of Metropolitan Authorities, as quoted in *The Independent*, 11 th September, 1992.

Or maybe he was burning with excitement inside but what was only visible is a form of composure. “The disciplined performer is also someone with 'self-control'” said Erving Goffman (1959, p.137). The title of a self-help business book might inform his performance: “Transparency: How Leaders Create a Culture of Candor” (Bennis et al., 2010). The key word is candor: the spontaneity of a disinterested soul — is it not what Taillefer performed? Anyhow, as we will see in further parts of this chapter, this narrative will still be used by DGFIP as well as Etalab.

I was surprised by this situation where Bixiou, the author of the law articles from CRPA deceptively acknowledged that only respecting this regulation, being “obliged” and loyal to it was not a sufficient motivation for administrations to take their responsibility. The scene shows that the Etalab team strongly wants administrations to pursue a transparency initiative, and are ready to close their eyes to administrations wish to show-off. A transparency initiative could therefore be an occasion for an exemplar publicity understood here as the act of ensuring that disclosures are known, an improvised self-promotion, that will be managed through PR, the publicity of the Right to Explanation and the branding of Open government policies through their commitment to “openness” and “transparency”. In the following chapter we will see that once the housing tax source code is disclosed, we will witness an exhibited morality and the flaunting of being honest that is disconnected from full accountability.

The discussion envisioning the gesture of transparency as exemplarity was possible because at this moment of the meeting, the audience of the disclosure was no longer Victor d'Aiglemont, but a virtual public and other competitors in the theatre: other state members of the OGP, the think-tank FING and other ministries committed to transparency. While d'Aiglemont initiated and provoked this meeting, his request and intentions were not much discussed during the encounter. This silence about d'Aiglemont echoes Erving

Goffman's idea that the "treatment of the absent" audience is key to script the show: "When the members of a team go backstage where the audience cannot see or hear them [...] plans may be worked out for "selling" them, or employing "angles" against them, or pacifying them" (Goffman, 1959, p.170).

Since d'Aiglemont was forgotten, the political and public justification the DGFIP was supposed to deliver to him was also not a focus anymore at this point of the meeting. This political and public justification is possible if the three interrelated preconditions of an effective accountability are achieved: transparency delivers an *individualised* information (as stated in the CRPA's law articles); this information should be delivered in an *intelligible* form dependent on the interpretative capacities of lay citizens (Kelly, 2013, p.3); transparency must create a sentiment of *morality* (Habermas, 1991, p.104. Baume, 2018, p.211). In my study the political justification needed to be made public is a technical one, it is expressed in the CRPA article R. 311-3-1-2 in the following terms: what is to be justified is "the degree and mode of contribution of algorithmic processing to decision-making".

Consequently there is a moment where the actual legitimate audience stops to exist, where the "virtual witness" is put at distance (Woolgar and Coopmans, 2006). When the dirty work of producing a justification of how the housing tax algorithm produces the tax amount is no longer the focus, and when creating the conditions of interpretative labor of disclosures is not seen as a central task: the link between disclosing and accountability is broken. The consequence is that if Victor d'Aiglemont wanted to have a full accountability of the housing tax he would be obliged to make request to an administrative court. Clearly Etalab had not the legal legitimacy and authority to put pressure on DGFIP to disclose elements to d'Aiglemont. Therefore, my argument is that the act of transparency is performed for other means than accountability: for the pride of exemplarity or more simply to foster the culture of Open Government in administrations.

## Conclusion

In the previous chapter, the analysis of disputes regarding administrative algorithms helped to specify that transparency was practised through different performative modes. In this chapter, I focus on the limitations of transparency, and how negotiation and scripting are the strategies with which actors attempt to render this problematic tractable.

In Scene 2, the limits of where transparency should be performed have been mapped. This first *negotiation* between the two teams was centred on the *temporality* and *quantity* of disclosures: when should the VLB be explained — as a general information for all citizens or only when DGFIP is requested — and how much should be exhibited — the VLB need to be fully unpacked as the result of an external algorithm coming in input or the internal mechanics of the tax calculus is enough to make the system accountable. Of course, the two teams are not aligned on what should be made public and how, here we see that there are *negotiations in the scripting*, in the way to anticipate and if the cover of certain organisational realities are permitted or not. In other words, what has been *negotiated* in this scene is the conduct of a *selection* process, a division between what should be made public and what should be protected. I also showed that the ignorance of the regulation is the performed script used inside this process of negotiation: an attempt to intervene on and orient the conduct of negotiations. With the resource of ignorance we understand that there are possible ways to *script negotiations* and anticipate their conducts.

In Scene 3, two interrelated dimensions of scripting transparency had been delineated: the *anticipation* of potential contestation and the proactive attempt to *plan* how and when the Right to Explanation will be used. The anticipation is a problematisation of the risky blame that may disrupt future performances, and the planning is a prescription of contingent solutions. Here,

*scripting transparency* is playing with the ambiguity of FOIA demands. It requires a knowledge of legal instruments and a way to manoeuvre with what the Law allows and forbids. In Scene 4 is negotiated the status of the housing tax as an “algorithm” through a staged ignorance of State algorithmization. Again, this gesture of not-knowing is a possible *script* to intervene and influence the *negotiation* process. Finally, in Scene 5, Etalab try to obtain from DGFIP a commitment to achieve legal obligations coming with the Right to Explanation. In doing so, the task force *negotiates* the achievement of transparency and promises that DGFIP will appear exemplary. This promise is in itself a form of *scripting*, a prospective vision of how organisations could use transparency and appearance as political forces. Furthermore, as I have shown that using the discourse of exemplarity have been prepared by Etalab before the encounter, we see that there is in fact a *scripting of the scripting*. In theatrical terms, the performances of the scripting have been prepared and partly rehearsed.

The first phase of actions described in this Chapter goes from the negotiation on how to select/divide the potential of transparency (Scene 2) to its scripting performed in anticipating/planning how citizens can claim for more accountability (Scene 3). In this first phase from negotiating to scripting, the housing tax algorithm will be first staged as an old, opaque and tentacular infrastructure (Scene 2), then DGFIP will attempt to perform its unity in order to protect and reduce the scope of what should be made explicit (Scene 3). In both cases, the algorithm is a *post-digital* entity used to figure an assemblage of institutions, fiscal policies, tenants, landlords, and technologies of calculation.

In the second phase of discussion, the negotiation is centred on whether the housing tax is an algorithm (Scene 4). DGFIP is not fully excited to qualify the system in such a way because it redefines its action and forces the organisation to comply with the Lemaire Bill regulation. Etalab authority in interpreting the CRPA pushed DGFIP to admit the existence of an algorithmic system to calculate housing tax amounts. In the third and last phase of

negotiation, there is no discussion about the ontology of algorithms but on the use of a seductive dramaturgy of transparency foregrounding the pride of performing this ideal (Scene 5).

To summarise, ordering the limits of transparency oscillates between two movements. The first, *negotiating*, consists in providing a provisional diagnosis of the situation: what could be selectively made public; weighting the quantity of what may be disclosed; fixing the ontology of what must be rendered legible. This is a way to order organisational realities and provide an apparent security. Negotiating is then a protecting and defensive theatrical move especially since it is made through the use of ignorance. The second movement, *scripting*, is a more speculative activity of managing contingencies: how and when citizens will contest, what about using exemplarity as a discursive strategy...scripting is better understood as a seductive and offensive gesture. The apparent passivity of ignorance is used in both movements to negotiate and shape organisational realities and withdraw or script the performance of transparency.

Finally, this chapter also prepared the presentation of algorithmic transparency performances that will take place after this phase of negotiation and scripting. Facing the impossibility to deliver a full accountability through the FOIA mechanism, in order to still practise a “just enough” transparency, Etalab and DGFIP will use other devices of transparency described in the next chapter: the delivery of the housing tax source code and documentation, the creation of a simulator of the tax calculus. The use of these devices could be seen as a theatrical compensatory gesture responding to the intrinsic opacity of the housing tax algorithm. While the disclosure of the source code will be situated as the main response to Victor d'Aiglemont's *controversial* demand, the experimental simulator will be an artefact epitomising the *provocative* mode of transparency performances. Indeed, the release of the simulator will be another moment where the ontology of the housing tax will be troubled: what is being

simulated? The “real” housing tax or a curated version of it? Does the simulator generate a new housing tax algorithm? Can a second algorithm make a source algorithm more transparent? Here are some of the interesting problems provoked by this innovative tool. Finally, a web TV show organised by a public policy magazine will be the occasion for Taillefer and Baudoyer to perform in front of an audience the dramaturgy of exemplarity that has been scripted during this meeting. During the live interview of these transparency practitioners, their *self-presentation* will be again crucial to produce credible performances.



## Chapter 6: Performing in the Theatre

### Transparency as Exemplarity.

#### Introduction

In the context where pressures to achieve accountability are low, Chapter 6 describes how the *theatre of transparency* opens a space to position the concept as an *exemplary* practice and a qualitative attribute bypassing the justice that can be given through FOIA mechanism. The chapter offers a final response to the core question of the thesis: transparency is performed thanks to *exemplary* moves facilitated by a delegation of transparency management from DGFIP to Etalab. It is important to describe this delegation mechanism to understand the process through which certain persons and institutions will be made responsible for performing transparency. Ultimately, we will see that *exemplary* disclosures resulted in the pacification of contestability. Studying the pacifying effects of performances is necessary to evaluate the success and failures of the negotiation and scripting techniques envisioned in the previous chapter. Moreover, it is a way to probe the consequences of disclosures on the witnessing capacities of citizens.

The chapter analyses three disclosure events each using a different device and each branding differently the *exemplarity* of transparency performances. Indeed, the process leading to the disclosure of the housing tax source code will be delegated to Etalab, letting DGFIP publicise this achievement with a bragging press release. This document will position DGFIP as a “forerunner” organisation. Soon after, the housing tax simulator created by Etalab is more clearly the device pacifying the journalist’s will to request accountability. Here, *exemplarity* comes from the innovativeness of the simulator. Finally, the interview featuring the two organisations during a web TV show appears as an old fashioned performance of *exemplarity*: a moment of branding where the pacification of contestability was at its peak.

The sequencing of the disclosure events analysed in the present chapter inform us on the specific temporality of transparency enactment: we are moving from events where transparency is still achieved — with a source code disclosure and documentation — to moments aimed at transforming organisations' practices and reputation. Indeed, the simulator is a public policy experiment, the web TV show enrolled a media actor in order to inform a wide public. Put differently, what I hope to show is that we are moving from *transparency as a bureaucratic duty* giving access to administrative documents (thanks to FOIA mechanisms) to *transparency as an innovative exemplarity* (performed in opening source-codes, documenting and simulating algorithms). In short, it seems like when actors cannot achieve accountability, they try to appear innovative: it is their way of practicing transparency.

In chapter 4, we have seen that performances of transparency transformed their environment through the staging of citizens, disputes and algorithms. In this last empirical chapter, *exemplarity* is the specific performative style of transformation applied on the housing tax case. It will be staged as a voluntary, difficult and meritorious act. Throughout the thesis, there is therefore a contrast in the performative style of transformation: if in chapter 4 the transformation of actors was dominated by a controversial climate, in the present chapter the atmosphere of performances will be closer to a positive solutionism. This contrast signals the attempt to pacify disputes through a seductive *exemplarity*.

Performing transparency as an exemplary practice requires a particular form of management and the separation of responsibilities. The analysis of these disclosure events will demonstrate that transparency is practiced through a process of *double delegation* where Etalab worked on behalf of DGFIP to prepare disclosures (first delegation), and where the labour of interpreting the algorithm has been delegated to citizens that were forced to use a simulator and

make sense of incomplete disclosures (second delegation). The consequences of this delegation process is that transparency *pacifies* contestations.

## I) The housing tax source code disclosure

### Delegating transparency management

Four months after the meeting between Etalab and DGFIP, the source-code of the algorithm and its documentation are the subject of a groundbreaking press release<sup>44</sup> announcing their publication. Despite complex calculation of local taxes being a niche topic, this announcement had a surprising wide circulation in specialised magazines and national news media (Combiér, 2018; Guilloux, 2018; Berne, 2018; Lausson, 2018; Gautreau, 2018). The orchestration of these publications are the main response to the climate of controversy narrated in Chapter 4. We will see that in performing a “just enough” transparency, disclosing the housing tax source code and documentation constitute a way to pacify the risk, fear and danger of potential accountability failures exposed in the previous chapter by DGFIP’s jurist.

In this first section we will see how DGFIP mandates Etalab to take care of the transparency management. This process will provide a theatrical self-consciousness to Etalab that will prove to be useful to envision how to perform exemplarity. The overall effect of the delegation process will be to complexify the allocation of responsibility between the two organisations. In the next section, we will analyse how the press release and documentation divide what could have been disclosed through a process of back and frontstaging.

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44 - Ministère de l’Action et des Comptes publics. (2018). *Open data : la DGFIP met en ligne le code source et l’algorithme de la taxe d’habitation* [Press Release]. 20 December. Available at: <https://www.economie.gouv.fr/mise-ligne-code-source-algorithme-taxe-habitation> (Accessed: 24 September 2020)

It is important to recall that at the moment of the press release, journalist Victor d'Aiglemont was still waiting for an individualised response explaining his housing tax amount. Instead of doing justice to Victor d'Aiglemont, DGFIP preferred to brand the housing tax source-code and to push Etalab to manage this disclosing process. Put differently, to circumvent the judicialisation of transparency through the Right to Explanation, the fiscal office uses a standardised yet seductive digital disclosure. Nevertheless, this release operated as a “just-in-time” transparency: a way to temporarily satisfy the journalist and plugged his contestability with a wide explanation of the tax calculus. Célestine Rabourdin’s testimony provide evidences of the delegation of transparency management from DGFIP to Etalab, the data scientist gave also her point of view on the slowness and incompetencies of the fiscal administration:

Célestine: "In early 2018 I found myself alone at a meeting where Isidore [Baudoyer] and Jean-Jacques [Bixiou] should have been. I have a backstory against Jean-Frédéric Taillefer so that's also why I wanted to do this project. I wanted to get in his paws again. [...] Taillefer is really looking for the dirt, if he can get the job done, get it done by somebody else and then take credit for it, he'll do it. I told DGFIP: “leave me the code, give me fifteen days from the time I get it and I'll tell you if it's okay or not”. [...] Fifteen days later I tell them: “the code is not too bad, don't worry about it, however we add: the documentation, a set of examples because we're being generous, basically little things that will make you do a good job and not just the bare minimum”.

[...]

Célestine: “The CADA intervened during the summer [to give a positive response stating that DGFIP should disclose the code], around June 20, but Bercy [the Ministry of Public Finance where DGFIP is situated] didn't warn me, and around the 7th of August, they came and said: "So where

does it stand? We are in a hurry, blah blah blah..." and the guys wanted an event that *shines* [in english], but if you publish it on the 15th of August it's over [because it's the end of the summer], so I answered them during the day saying: "listen it's publishable, it's publishable in 1 click." And then there was a terrible misunderstanding with them: I was saying "it will be published here on this website" and the guy [Taillefer] was saying "but there's nothing", I was like: "if I put it on the website it becomes public" and he had a hard time understanding the idea of private/public directory! It wasn't a private one that I was going to put in a public mode, I was going to publish directly on a public repository. And then at one point he (Taillefer) said, "we have the "go" to publish tomorrow" so I confirmed that I had the message and on Friday I tell him "there it is, I put the code online" and in the afternoon, while there's all our communication underneath in the emails thread he tells me again "I don't understand why the code is online" and at this moment I understood that there was no understanding from them of what we were doing. The press release came out a week later after the code [probably because DGFIP communication team was not aware of this disclosure]. And we published the code with Etalab's Github account because he didn't want to publish it with the DGFIP one. Then those who follow Etalab have seen it, this is why they posted it on developers forums, in fact what was really funny is that even putting a link on DGFIP's page of "data.gouv.fr" [the official French open data repository] redirecting to the Github wasn't possible for them. We did it. We logged in as an "admin" and did it."

Me: "So they actually asked you to do the thing for them."

Célestine: "Yeah, except we [Etalab] are not here to do that, what was hard is that they were waiting for legal validation, but we don't legally validate this code, we just make it available, so you always had to find the words to say, "we think it's good, but you're the one who kept the responsibility."

Me: "and here you were the only one taking decisions?"

Célestine: "No, there was also Jean-Jacques [Bixiou]...and at one point Jean-Jacques said "publish!", and I said "no I don't want to publish without their agreement, imagine if there is a problem" so I was desperately waiting for the email that said "go ahead", on the other hand I felt it was hard for them to take that risk, and so I think that's why we lost almost five months, I had finished the job in April or mid-April and we published in early September."

[...]

Célestine: "What I hadn't anticipated at all is that there will be a much more important publicity for the housing tax than for the income tax code. To give you a scale, the income tax code I think there are ten stars on Github, for the housing tax there are sixty five."<sup>45</sup>

[...]

Célestine: "We're really in politics in this affair, [if DGFIP disclosed] it's to be at the forefront, to show that they are an exemplary administration, the problem is that while we could have done the job in one month, which is the legal deadline, well, they've done it in nine.[...] It's a world [the one from DGFIP] where we have all the time in the world, but I don't have all the time in the world when I'm volunteering and doing the work for someone else. [...] It's possible that they don't have enough resources but then these guys are drowning in a glass of water and they're scared all the

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<sup>45</sup> - Stars are a metric used by the Github platform to evaluate users and projects. Developers on GitHub can "star" other user's repositories, in doing so they save them in their list of "Starred Repositories". Some people use "stars" to indicate that they like a project (similar to the "like" button on Facebook), other developers use them as bookmarks so they can follow the evolution of projects.

time, they're scared that if we publish this, it's going to fall on them...". [...]  
The administration is surely overwhelmed but there are also people who are not in their place or who don't want to do the job simply, we promote ourselves by drowning, put in that way it's very paradoxical."

What appears from Rabourdin's testimony is the blurred governance of the disclosing processes. Indeed, an interesting point is made by Rabourdin in her testimony about the allocation of responsibility: while the transparency management has been delegated to her, while she even has been "generous" in the code disclosure and benevolent during the whole process, individually she does not seem to be inclined in performing a shared responsibility of the disclosure with DGFIP ("you're the one who kept the responsibility"). We can imagine that if a problem, mistake or bug would have touched DGFIP responsibility or the source code integrity it might have been possible for the administration to withdraw its responsibility and blame Etalab for mismanagement. This type of breakdown and moment of vulnerability would have shown the blurred governance of the whole disclosure process and the lack of clear responsibility. The vagueness of the disclosing governance gives an agency to organisations on the way they could disclose the housing tax. It gives a space and time to anticipate how transparency can be *staged*.

What has been delegated to Rabourdin and more broadly to Etalab is the burden to think and anticipate the risk of exposure entailed by transparency performances. Rabourdin's anxiety is visible when she says to Bixiou "imagine if there is a problem" while the lawyer pushed her to speed up the code release. After all, the fuzzy governance increased nothing less than Etalab's moral and theatrical self-consciousness while at the same time it detached DGFIP from the core transparency management. This hidden division of labour between an advising task force and an administration failing to achieve accountability is the central mode through which transparency has been managed. The delegation process helps to separate and specify these theatrical roles. It is reinforcing an

institutional script where Etalab appears as the infomediary (managing disclosures) and the stagehand (orchestrating the staging).

At the very end of Rabourdin's testimony appears an interesting clue showing her theatrical self-consciousness as well as acknowledging DGFIP's dramaturgy of exemplarity. I am talking about the moment where she said: "we promote ourselves by drowning, put in that way it's very paradoxical". The "we promote" is a sign showing the recognition of a staging and the branding strategy to use a narrative of exemplarity. But to whom this "we" refers in the sentence is ambiguous. While during the interview she commented DGFIP action in talking on behalf of the organisation (the "we promote" must then be understood as "they promote"), her organisation is also complicit in staging exemplarity and had interest in this promotion of transparency. This ambiguity comes from the confused allocation of responsibilities between Etalab and DGFIP.

Rabourdin's acknowledgement of the paradoxical action of DGFIP is in fact the paradox instantiated by the dualism of the transparency theatre where "we promote" means "we frontstage the code and appear exemplary" while is at the same time backstaged DGFIP incapacity to manage the disclosing process — exemplified by the sentence "at this moment I understood that there was no understanding from them of what we were doing". The dualism of the theatre is performed through a duplicity: a performance of make-believe hiding a failure to achieve accountability with exemplary disclosures. It is a dualism mirroring what will be unpacked in the next section: the curation of information to be disclosed as part of the press release and documentation. If during the negotiation and scripting phase the anticipation of future performances rendered transparency selective, when the performances take place, they operate a division, a cut constituting a communication in two senses: the audience discovers partial information but DGFIP keeps some elements that then become strategic assets and protective resources. The duplicity and



selection-curation process are two techniques to maintain the dualism of the theatre: its propensity to create a border between revelations and secrets.

From the division of labour envisioned in this section, we moved in the next to the division of transparency potential of disclosed information: the idea that what the press release and the documentation reveal has been selected then carefully distributed in these formats. This compartmentalisation of knowledge goes towards on one side a better understanding of the calculus and on the other a protection of certain realities. Studying the division of transparency is being alerted by the political force of appearance to attract attention, a necessary attention to have convincing performances of exemplarity.

### **Dividing transparency**

Since the press release, source code and documentation will share some information about the tax while at the same time hide others, they divide, reduce and separate the potential of transparency. The performance of transparency appears then provisional, adapted to the covering of certain organisational realities. Moreover, the publication of the press release is sustained by a dramaturgy of exemplarity. This section will explain first the process of information division than the use of the meritorious rhetoric.

To start explaining this division process, three important facts are hidden from the press release. Firstly, the complexity to explain the VLB is not acknowledged while we have seen in the previous chapter that DGFIP knew it was the core element nurturing opacity. Secondly, the fact that the whole preparation of the source code as well as its publication has been done by Etalab

and more precisely delegated to Célestine Rabourdin. The press release attuned this fact in talking about a hand in hand work but Rabourdin testimony contrasted with this point of view. Thirdly, the fact that this disclosure has been provoked by Victor d'Aiglemont's contestation. In this part, I will expand the implication and meaning of these three backstagings.

The backstaging of information through the press-release shows that documents are used as *props* participating in the *self-presentation* of actors. Following STS scholar Stephen Hilgartner it means that “theatrical self-consciousness [are] embodied not only at the individual level but also in procedures and material practices that instantiate it as a kind of distributed cognition” (2011, pp.192-193). I would say that the press release and documentation are *defensive* responses — the DGFIP has been “attacked” by d'Aiglemont — and *reactive-proactive* props since they participate in the distributed effort towards impression-management. As in all bureaucratic settings, in the theatre of transparency documents are *props* to control information about algorithms. Following the anthropology of legal documents from Annelise Riles, the press release “made manifest a reality of levels”, in the sense that the document points to various contexts or scales of the algorithm — the housing tax as a public policy, software code and manifestation of fiscal laws — but its publication reveals also “levels of realities” since it is a curated performances discarding the vision of certain organisational realities (Riles, 1998, p.379). In the algorithmic drama, this document is a clue showing the duplicity of DGFIP, the necessity to control certain organisational borders, a *prop* serving a performance of make-believe.

Nevertheless, despite these omissions in the press release, the 4 pages of documentation constitute an important explanation of the main components of the housing tax calculus, as the press release explains (my emphasis): “The transcription of the mechanisms of the housing tax calculation algorithm has been done in such a way as to allow taxpayers to *reconstitute in a didactic way*

the amount of their tax for the vast majority of the taxes issued. The document describing the algorithm will be accessible in the public area of the "impots.gouv.fr" portal."<sup>46</sup>

While the documentation is a precious artefact to reconstruct the general mechanism of the calculus, at the individual level it will expand the borders of opacity to other niche elements of local fiscal legislations. Despite DGFIP's attempts to perform the unity of the algorithm, from the documentation the tentacular details of the calculus are visible. As Etalab data scientist Célestine Rabourdin told me during a formal interview: "objectively the four pages of documentation are not bad, but they do not at all respond to the complexity of the calculus". For example, they do not address the calculus of the VLB. Consequently, even with the documentation, a full individualised accountability is not secured and the housing tax remains a public secret — a system visibly invisible (Strathern, 2000).

It is important to note that DGFIP did not create this documentation especially for d'Aiglemont or for this public press release but simply reused and republished a documentation that was already existing but lost in the maze of their website. Along the same track of analysis, in his study of Open Data disclosing methods in the cities of Berlin, London and New York, organisational sociologist Maximilian Heimstädt identified that one of the core techniques of "open data washing" used by agencies consist in "repackaging information that has already been published" (2017, p.83). This repackaging of the documentation by DGFIP is protective: fed by the fear of contestability, it is a performance to avoid future prejudices, a way to pacify the affective dramatisation of the public affair.

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46 - Ministère de l'Action et des Comptes publics. (2018). *Open data : la DGFIP met en ligne le code source et l'algorithme de la taxe d'habitation* [Press Release]. 20 December. Available at: <https://www.economie.gouv.fr/mise-ligne-code-source-algorithme-taxe-habitation> (Accessed: 24 September 2020)

Importantly, *staging transparency* can be achieved through different means: in actively hiding controversial information as well as in passively delivering an already existing document. Here, *staging transparency* consists in providing accounts of things *as they already are*. Actors such as DGFIP do not perform transparency as a creative work. In theatrical terms, witnessing this repackaged and repurposed information is a bit like going to a too-short and unfinished show that has already been secretly played a lot of times: the *fatigue* of an algorithm's documentation. This lack of effort in the performance of transparency counterbalances their attempt to appear exemplary.

Moreover, while preparing the source-code for disclosure, Rabourdin found inside DGFIP online maze another more detailed and accurate documentation of 20 pages. To reformat and simplify this longer documentation would have been a considerable work that apparently DGFIP did not want to do. This is just as if DGFIP pursued the exact opposite of what Bixiou advised and scripted for them: "the more the general information is of a good quality, the less you will have individual requests". On the contrary, backstaging details of the housing tax calculation is performing a form of discretion, a "tact in regard to facts" according to Erving Goffman (1959, p.147). In this way, DGFIP did not follow Etalab's scripting. While it is understandable that the press-release is a protective gesture, it is also clear that this curated performance deviates from a legal empiricism at play in FOIA demands — what long ago Alexis de Tocqueville has called the "taste of tangible and the real" (de Toqueville, 1835, cited by; Ezrahi, 1992, p.366). Put differently, dividing the potential of transparency is to control the appearance of the "real facts".

So far, in this section we have seen that transparency is divided by its oscillatory appearance through devices and the constraints of demands. The duplicity is secured through selecting what information appeared in a press release. My claim is that the theatre of transparency is configured by the instrumentalisation of transparency devices and they prove their efficacy not

only in hiding controversial facts but when they are sustained by a dramaturgy of exemplarity. It is both the rhetorical movement to convince and the mobilisation of devices that will help DGFIP to appear as the credible performer of a divisible transparency, a communication gesture ordering the realm of algorithms (in)visibility.

Instead of a loyal communication of the tangible evidence, what the press release frontstaged is a performance of exemplarity. As it has been scripted at the preliminary meeting and proposed by Etalab to DGFIP during the negotiation meeting, the press release performed the exemplarity of both organisations and more especially DGFIP (my emphasis): “The department was a *forerunner* in opening up the source codes of its *major* applications with the release of the 2016 code source of income tax as well as in 2017 of historical vintages of the code since 2010 and its annual updates. The DGFIP is *continuing along this path* with the publication of the source code for the 2018 housing tax. DGFIP, in conjunction with DINSIC/ETALAB, has carried out work which will facilitate the *best* reuse of the code. It will be accessible on the platform Data.gov. [...] The DGFIP is thus one of the *pioneering* administrations in the implementation of the Public Data Service (PDS), as illustrated by the publication of the computerized cadastral plan in 2017, which is one of *the most widely used* reference data sets to date.”<sup>47</sup>

As it was already the case during the early prelude at Etalab, in this press release is backstaged César Birotteau’s litigation which lead to “the release of the 2016 code source of income tax” as well as Victor d’Aiglemont request which provoked “the publication of the source code for the 2018 housing tax”. Unsurprisingly, in one of his articles d’Aiglemont commented on the press release with these words: “the institution forgets to say, however, that it took a bit of pushing and shoving to comply with its legal obligations...”.

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47 - *Ibid*

The disclosure is presented as a voluntary act by a “forerunner” and “pioneer” administration while the decision of the CADA to push the DGFIP to publish the code is also not stated in the press release. This backstaging of the contestation is an example of transparency pacifying effect: administrations do not want to acknowledge their accountability failures and present disclosures as progressive accomplishments whereas they are the result of administrative contestations that took place in front of regulators and courts.

In this section, we have seen that bypassing justice is possible thanks to the effects of performances. In forgetting the Right to Explanation and the emancipatory effect of accountability, performances take in charge the labour necessary to brand exemplarity. Indeed, as noted by sociologist John Law in his ethnography of the Daresbury Laboratory, performances such as disclosure made in the name of “transparency” orders the concentration of attention and can be used as visibility devices regardless of their accountability effects: “[it is all about] convening a great deal into not very much. Or a process into an event. [...] Performances *stands for* all the hidden work. All perform the deleting work of ranking. All perform the heroism of a star system. All perform a version of dualism” (Law, 1994, p.166).

Following John Law, we can say that exemplarity as the heroism of a genuine transparency is a performance displaying “not very much”, and backstaging the “hidden work” of the delegation process. In other words, *transparency as disclosure* hides the possibility of *transparency as the visibility of an organisational process* (Bernstein, 2017, p.218). This “not very much” is a limited transparency that is nevertheless useful to have a broad understanding of the housing tax algorithm. The press release was this “event that shines” as expressed by Célestine Rabourdin: a moment that “stands for all” the efforts, a staging that conveys “a great deal”.

Now that I introduced the delegation of transparency management, in the next part, the housing tax simulator will be understood as another instrument to perform exemplarity and pacify contestability. The interpretative labour will take place through an interactive transparency that will reduce the claims for a full accountability of the housing tax. With the emergence of the housing tax simulator, we will see another facet of transparency as “innovative exemplarity”: more than providing the means of calculation through a source-code and a documentation, Etalab proposed a way to replay the algorithm. While the achievement of accountability through the Right to Explanation was the promise of a personalised and intelligible explanation, the source-code and documentation were targeted to a general audience. The housing tax simulator renews with the initial ambition of providing a meaningful understanding at the scale of a citizen configured as a web user.

## **II) The housing tax simulator.**

### **Pacifying the transparency witness**

The idea that a simulator could be an innovative means to help citizens understand their tax surfaced at the prelude/rehearsal of the encounter narrated in the previous chapter. When Bixiou envisioned that the VLB would not be made clear and that therefore full accountability was impossible, we brainstormed alternatives to the classical FOIA disclosure. We all had different ideas: I thought about an online enriched documentation, Baudoyer proposed a simple written form of calculus that would explain the three main variables of the calculus (marital status, type of housing, location), Bixiou talked about a decision tree orienting citizens in their fiscal situation and finally Rabourdin envisioned a web simulator.

After an afternoon discussing the technological infrastructure of the housing tax, Célestine Rabourdin laid in front of me the first stone of the housing tax simulator. Technically speaking, the simulator is a web application designed with *Shiny*, a software package of the statistical programming language R. Even the name of the software package used to design the tool embodies this seductive rhetoric of exemplarity. Interestingly Rabourdin is a statistician with a political science background now positioned with the shiny title of “data scientist”.

While I was not involved in the release of the housing tax source code, however, I participated in the collective emulation consisting in speculating about new types of transparency devices. At this moment of the ethnography, I was therefore acting through an *evaluative* approach envisioning what could be the innovative impact of providing digital experiences of transparency. In doing so, my aim was to be aligned with the ambition and day-to-day work of my collaborators: it was a tactic to become part of the organisation. In the field, this *evaluative* approach is beneficial for understanding the technological modes of performing transparency developed by actors. In this way, it can inform the *performative* use of the simulator in publicising an exemplary transparency: the theatrical effect it has beyond its simulating capacities.

When we collectively imagine this simulator, we felt excited about the belief that transparency could be experienced through a dynamic interactivity, with an artefact simplifying calculus and judgments, mobilising heterogeneous data while almost permitting the “direct manipulation” of the algorithm (Shneiderman, 1981). The promise of *personalised* explanations of the tax calculus gained in using the simulator is what nurtured its status as an exemplary manifestation of an *individualised* transparency.

As pioneered by HCI scholar Ben Shneiderman, simulators “offer the satisfying experience of operating on visible objects. The computer becomes



transparent, and users can concentrate on their tasks” (Shneiderman, 1981, p.1). Moreover, the beneficial surplus of a simulator is to test different parameters and configurations, to perform a playful interaction that promises to be a heuristic experience. This *gamification of transparency* is presented by Rabourdin in her blogpost while she targets the use of her tool towards a taxpayer willing to play with the calculus’ variables: “The tax documentation produced by the DGFIP is particularly rich and detailed. Is it, however, sufficiently precise and complete for a motivated citizen to understand the calculation of his housing tax to the nearest euro? This is the experiment that I wanted to carry out and that has enabled me to put an application online for educational purposes: <http://taxehabitation.etalab.studio>. [...] This simulator also makes it possible to evaluate the effect of a change in personal circumstances, for example with the arrival of a child, a significant increase in income or a divorce.”

Despite this seductive “transparency by simulation”, the tool will be another agent of pacification since through this artefact the labour of interpretation has been delegated to the users: they are asked not to wait for new FOIA disclosures, but helped by the simulator they should produce meaningful explanations of the calculus with their own knowledge and skills. Indeed, during an informal meeting with Victor d’Aiglemont few weeks after the simulator’s release, the main witness of the theatre suggested to me that he stopped his FOIA requests and articles about the housing tax after the publication of this tool because it gave him a broad understanding of his tax amount.

This *personalised* explanations of the tax calculus renewed with the Right to Explanation ambition to provide an *individualised* accountability: this is what could be seen as exemplary about it. The simulator did not betray the spirit of the law, on the contrary, it reformulated the wish of an intelligible explanation in a convincing yet experimental way. Victor d’Aiglemont’s

acceptance of the simulator showed that he was aligned with Etalab's desire to appear as an exemplary innovator. Using the *post-digital* approach of David Berry, we could say that a simulator is a seduction orchestrated through the "surfaces of computation" understood as what Berry calls "theatres of action and performance" (Berry, 2015, p.44). In the theatre of transparency, d'Aiglemont was the adequate witness in capacity to use the simulator, the validated journalist able to make sense of missing elements or contingent errors.

Since the simulator has been published eight months after d'Aiglemont's initial request, the temporality of transparency has been important to pacify his contestation, this delay in the response discouraged and exhausted him. d'Aiglemont could not spend more time on this topic and needed to write new articles. As I explained in Chapter 4, d'Aiglemont wanted to push DGFIP to be in compliance with the regulation but his expectation towards accountability could have been more important. For him, his articles were successful because in disclosing the tax source code, DGFIP demonstrates its alignment with the regulation. He did not continue to contest DGFIP since he was not particularly suffering from an unfair housing tax amount. As I narrated in Chapter 4 through the testimony of CADA administrators, being staged as an ambassador of the citizen not concerned by an algorithmic prejudice limited his legitimacy as a transparency witness. He then appeared more clearly as a mediator between citizens, administration and regulators.

In the studied configuration, the simulator shows to the witness what has already been decided, it is better understood as a device of validation rather than an instrument feeding contestability. As Belgian lawyer Mireille Buydens noted: "the first duty of the political power is no longer to listen but to explain: since then, transparency has dethroned in the public discourse the traditional place devoted to the popular will" (Buydens, 2004, p.64). Put differently, the layers of accounts produced through transparency initiatives disengage administration in the obligation of hearing citizens contestations. The realm of

information and simulation neutralises the public “right to hear” full accounts of an algorithm and “to be heard” for the unfair administrative decisions it suffers from (Ananny, 2018). The neutralisation of contestability is performed through the attractive dimension of the simulator and the seriousness coming with the idea of exemplarity.

Moreover, the experience of making sense of a simulator’s explanations is different from reading a documentation. The simulator might immerse the citizen into the algorithm to the point where it naturalises its use, and if this innovative transparency tool is overly trusted it could even deactivate the necessity of explanations. If in the *theatres of proof and authority*, it was requested that citizens witness visual evidence produced by devices, in the *theatre of transparency*, simulation asks the witness to play and generate visual and textual evidence. In this delegation process, the responsibility of giving an account back to the citizen and the impossibility of achieving accountability are both backstaged. Geographer Andrew Barry thought about transparency as a “technical solution to the management of affect” (Barry, 2010). A way to compensate for the controversial mode of performing transparency thanks to an appealing and innovative tool.

How then did this delegation occur in the branding of the simulator? It is visible in the blogpost through a set of questions Rabourdin claimed the simulator can respond to, but she forgot to mention that the use of a simulator is not straightforward and in this situation it is the citizen-as-user who perform the labour of exegesis: “A person who wants to understand his own tax notice can enter his information and get the details of the calculation: why am I exempt from tax? Why am I granted an abatement when another is not? Why is this rate applied? Why am I entitled to the cap? To whom does the amount of tax go?”

Paradoxically, this list of questions is precisely what DGFIP should have been able to individually explain if the institution would have taken

accountability not only as a legal obligation but also as an occasion for pedagogy. Maintaining ignorance will trigger further contestability. Indeed, a new contestation recently occurred when in March 2020 a citizen that has seen the amount of his proprietary tax doubled from 2017 to 2018 requested the calculus of the VLB to the CADA<sup>48</sup>. This FOIA request came after DGFIP refused to give him a response. Interestingly, this request explicitly demands to have explanations about “algorithms” which shows that the *post-digital* vision of algorithms starts to be naturalised: five or ten years ago a citizen may not have reframed a fiscal tax as a set of computational artefacts. In the next section, I expand the analysis of the housing tax simulator by presenting some steps of its making while reflecting on broader engineering approaches to algorithmic transparency encountered in the field. I will present two different visions to understand the simulator: as a problematic simulacrum distancing citizens from the “real” algorithm, and as a necessary compensatory gesture inherent in front of the growing pervasiveness of computational technologies.

### **The making of a compensatory simulacrum**

As I mentioned it in the methodology chapter, Rabourdin did not let me collaborate with her on the simulator design because I think she wanted to keep it as a personal challenge and experimentation. Moreover, while she wrongly thought that I could not help in the simulator’s design, she finally asked some advice to a User Interface designer part of the Etalab entrepreneurship program. During the whole ethnography she was regularly in conflict with Baudoyer — she was in competition with him to perform an exemplary transparency — and since I was associated with him, it was difficult for me to approach her. While I took this missed collaboration as a failure of the ethnography, I understood that it was also a symptom of the opportunism driving Etalab employees: since the

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48 - See the response from CADA here: <https://cada.data.gouv.fr/20193869/>

topic of algorithmic transparency was not formalised by a specific project involving responsibilities, deadlines and a plan of action, developing the simulator was for Rabourdin a way to demonstrate her expertise and have a role in the organisational effort for more transparency. Ultimately, the internal competition to perform transparency inside Etalab was a contest to participate in the framing of exemplarity. Put differently, exemplarity was not thought of as a quest for a bureaucratic achievement of accountability but as a motivation inside a competitive market.

As sources to recreate a version of the housing tax calculation Rabourdin took her own tax letter, the documentation of 20 pages previously mentioned and the census file of local direct taxation items (REI) which is an aggregated file at municipal level detailing the local taxation data and rate by tax (real estate, housing...) and by beneficiary authority (municipality, trade unions and similar bodies, inter-municipality, department, region). During the interview I conducted with her she explained that her aim was to see if the open data and documentation she could use as a citizen to understand the tax were accurate and complete. In developing this research as a data scientist and ambassador of the citizen she wanted to test if it was possible to re-enact what she called the “intellectual path” of the algorithm. “It’s more of a communication issue” she said to me, the question motivating her was then: “are we capable of describing the rules?”. It is interesting to see here at play what I mentioned in the previous chapter: the “procedural epistemology” of computer science envisioning the algorithm as an intellectual device with explanatory effects and not as lines of code in a software (Abelson and Sussman, 1985). This vision is *post-digital* in the sense that what is searched is more the content and temporal enactment of instructions than the way a software or hardware is used to process a calculus.

Surprisingly, Rabourdin did not use the housing tax disclosed source code as the main source of her simulator. As she explained in her blogpost: “the

aim is not to carry out a compliance check on this code”, and later during my interview with her: “I don't have the data and the time to re-do the control of their code, the citizen will never read the code, the 4-pages documentation yes, the 20-pages if he or she is highly motivated.”

Paradoxically, the belief of making an algorithm knowable in simulating its calculus is in fact realised by creating another algorithm that Rabourdin hoped would mimic the original one. This dream of a transparency of algorithm through more algorithmisation is a typical response to opacity I witnessed many times during my inquiry.

In creating this suspicion on where is the “real” housing tax algorithm and in opening this never ending requests for transparency, the introduction of the housing tax simulator belongs to a peculiar mode of performativity, namely it is the philosophical problem of the “simulacrum”. This type of performativity has been well described by sociologist Fabian Muniesa in his commentary of the French critical theorist Jean Baudrillard: “Baudrillard added, ‘In this shift to a space whose curvature is not that of reality, neither that of truth, the era of simulation opens with the liquidation of reference’; and ‘It is about the substitution of reality with the signs of reality’ (Baudrillard, 1985, p.11). This, of course, makes sense to a lot of readers. But it also resonates very much with the good old Platonic cavern, that is, with a standard philosophical take mostly characterized by annoyance at the distance that may exist between what one can access in terms or thought or perception and the real thing – more exactly, the idea” (Muniesa, 2014, pp.20-21).

Using an evaluative approach to the study of transparency, this distance is a problematic obstacle since what is performed is a mimicry of the object of transparency troubling in return the object to be evaluated. While at the level of everyday life the housing tax algorithm is opaque, proposing another opaque simulator that fosters visual explanations and direct manipulation is

paradoxical. While simulators permit a “distant reading” of algorithms, “the intentionality of the black boxes of technology is increasingly divined” from them (Berry, 2015, p.54). Without evaluating the depth and quality of what can be simulated, surely for many citizens guessing explanations through simulating an algorithm is more difficult than having intelligible explanations with FOIA mechanism.

The simulator is a practical method participating in reducing the asymmetries of information between administrations and citizens. However, we should be aware that a method can fail and is the subject of a friction between designers and users literacies, the practical experience of the device, the open-endedness of web interaction, the way it will generate new doubts and partial accounts of the algorithms...and many other contingencies. As many innovative governmental task forces, the solutionism of Etalab suffers from a “technological determinism” (i.e. Kimbell, 2018, p.304. Alauzen, 2019, pp.55-56). Therefore, when Etalab positions the simulator as a transparency device, the service has a bias towards the success of the experimentation. The task force convinces itself of a future enhancement of transparency because it seeks to intervene or influence the prospective evaluation of transparency. This bias towards success is precisely what nurtures the positive discourse situating the tool as an exemplary practice, it is a rhetoric belonging to the “incurable optimism” of transparency advocates (Law, 1994, p.178).

Nevertheless, contrary to a vision emphasising the artificiality and deceiving quality of the simulator, it is also possible to envision this new transparency device as a necessary mediator to reach a partial understanding of an algorithm. As software studies scholar Wendy Chun proposed, it could be seen as a “compensatory gesture” for the growing opacity provoked by computational technologies: “The current prominence of transparency in product design and political and scholarly discourse is a compensatory gesture. As our machines increasingly read and write without us, as our machines

become more and more unreadable, so that seeing no longer guarantees knowing (if it ever did), we the so-called users are offered more to see, more to read. The computer — that most nonvisual and nontransparent device — has paradoxically fostered “visual culture” and “transparency” (Chun, 2005, p. 27).

Following Chun, we should not be too worried about the Baudrillardian “liquidation of reference” but must instead take seriously the housing tax simulator as a visual mediator to partial accounts of the housing tax algorithm. Simulators can be envisioned as interesting new transparency devices because of their innovativeness in presenting contents visually. The visual trick of “direct manipulation” established easy and routinized conventions of use, navigating and interacting became a consistent experience, consequently the visual experience of a graphical user interface (GUI) expanded the possibilities of performing algorithmic transparency.

GUI pioneer Alan Kay proposed that a software is as clay (Kay, 1984, p.53). Similarly, Software Studies scholar Matthew Fuller came to define these different clay scales as various forms of “transparency layers” moulding with each other: “each with its own syntax of translation, parsing or plunging into another scale” (Fuller, 2017). The housing tax simulator gives a visual and consistent account of the tax calculus at a particular scale, different from the source-code or the documentation. The experience of transparency is then envisioned not through a single event of a source-code disclosure but distributed through multimedia experiences: a whole field of practices. This will complexify the witnessing process, generate a fuzziness of accounts but also opens multiple forms of citizen participation.

Matthew Fuller continues by saying that transparency “to be sensed, must be motion-captured in a translation of one mode of transparency to another”. This translation is precisely performed by visual devices such as a simulator because they operate links between different scales. Of course this



capture is always partial but could be nevertheless solid if it is well designed. And this is where design work enters the theatre as a way to select, model, transform and repurpose content in switching or translating their formatting — from legal doctrines and laws to a source-code, from a source-code to a simulator. If the chain of translation operated in the design work is solid and loyal to the tax calculation, the chain of accountability offered to a citizen will also be robust.

We could say that as a new medium of transparency, the promise of the housing tax simulator rests on its capacity to bypass the slow temporality of FOIA and produce meaningful accounts of an intrinsically opaque algorithm. As visual studies scholar William J. Thomas Mitchell beautifully summarised: “Every turn toward new media is simultaneously a turn toward a new form of immediacy. The obscure, unreadable ciphers of code are most often mobilized, not to encrypt a secret, but to produce a new form of transparency” (Mitchell, 2015, p.114).

The simulator was seen as part of an “innovative exemplarity” because it could furnish an “immediate” deconstruction and explanation of the calculus. Mitchell directs our attention not on the black-boxing of the housing tax algorithm in a simulator but on the new types of understanding we can have with it. Now that I have shown the process of delegation ordering the management of disclosures, the division of transparency potentialities and the pacification of contestability through a gamified transparency, I turn to the branding of transparency as exemplarity performed by Etalab and DGFIP during a web TV show.

### III) Etalab and DGFIP on a web TV show.

#### The dramaturgy of transparency-as-exemplarity

This last performance of exemplarity took place a year after the housing tax press release and was broadcast on the web TV channel of Acteurs Public, a public policy magazine. Such delay in the publicity of transparency mattered for pacifying and facilitating the branding of transparency settlement. This event was the occasion for a first evaluation of the enhancement of algorithmic transparency. Since DGFIP stood as the paragon to follow, the attention directed to the media of the performed exemplarity was also intended at producing change in administrative efforts towards accountability. For STS scholar Stephen Hilgartner (2011), this “media orientation” is a specific theatrical self-consciousness where performances are strategic interactions.

Indeed, for DGFIP and Etalab, the “pursuit of visibility” was both a way to foreground “honesty” and strengthen their characters as genuine transparency advocates. Drawing on Hilgartner (2011, p.193), I argue that the presence of media inside the *theatre of transparency* is complex since the entity “media” corresponds to different characters: it is an audience, since journalists watch this types of communication; but it is also a performer because a journalist will give an opportunity to DGFIP and Etalab to present accounts to audiences; and it is finally a stage where discourses and embodied performances could be used as ways to shape the evaluation of what has been disclosed. If in the previous section, a press release and a simulator were used as devices to perform exemplarity, here it is the enrolment of the media as a performer and stage that sustains this dramaturgy.

Taking the form of an interview with Taillefer and Baudoyer conducted by the journalist Louis Lambert, it is evident that the audience recognises a

staged quality to this video. A web TV show is a re-enactment of a TV show which itself is a re-enactment of classical face-to-face debate. Of 22 minutes length, the interview was made live without interruption or *montage* which guaranteed a pretense of authenticity. Its title — “Algorithms: do administrations play transparency?” (*Algorithmes : les administrations jouent-elles la transparence ?*) — is particularly ambiguous and fits well the realm of suspicion and theatricality surrounding the performances. This question could be interpreted in two ways : “do administrations play the game of achieving true transparency?” or “do administrations play with transparency as a way to deceive us?”. In French, the expression “playing the game” (*jouer le jeu*) means realising something without necessarily a frankness or honesty, it conveys a sense of obligation, of acting in a relationship according to the rules set by the other person: a type of acting that may be a staging. In other words, the typical western “antitheatrical prejudice” (Ezrahi, 1995, p.311) is at the heart of this pun. However, during the interview the journalist did not contest the credibility of performers. I presuppose that he was unaware of the scripting backstory I narrated in the previous chapter, or maybe he knew everything but his editorial line forced him not to be too critical. Here is a telling edited transcription of the interview where Taillefer gives a broad evaluation of how his institution tackles the “game” of algorithmic transparency (my emphasis):

Lambert: "Jean-Frédéric Taillefer, you are the general data administrator at the DGFIP, it is one of the rare administrations that *play the game* of transparency, you have already published several source codes and explanatory documents — their operating rules — how do you go about *playing the game* of transparency and meeting the obligations of the Lemaire Bill in particular? How do you *choose* which algorithms you will work on first? How does the process of openness and explanation work?"

Taillefer: "What I will say is that it is first a *state of mind*, namely, the public finance administration is *completely convinced* of its accountability

to users, it is in this *spirit* that we tackled the opening up of our algorithms, so culturally the ground was favourable. I do not know if Isidore Baudoyer used the word "explainability/readability", but what is at stake — otherwise we will not achieve the objectives defined by the law — is to make the process that governs this or that algorithmic treatment comprehensible to everyone. So we have to work on dismantling this process for *pedagogical purposes*, even though we are sometimes in the field of a certain complexity, I would say that it is not a new job because we have this tradition, I would even say *this obsession to be clear* in the documentation that we provide to the public, but here we must go one step further and aim at being explicit, readable and concise so as not to lose the user. And what I can say is that it has been a work of several months, we've also *worked hard* with Etalab.[...]

Lambert: So how to effectively increase explicability?

Taillefer: [...] it's a challenge, I think we're at the beginning of a process, I think, we're all seriously thinking about it, we should *not refrain* ourselves from probing, from consulting our users to ask "do you understand what we meant? what's missing to make it clear" and then go even further in the pedagogical nature of the document...We are at the beginning of a process that will lead to greater transparency, this is the generic stage, but the next stage is the possibility of having individual and detailed information on what has been done concretely in the case of an individual.

[...]

Lambert: Is this going to be possible in practice [the individualised response] ? You're not going to get requests every day on this, but...

Taillefer: "That's why we're under a lot of pressure to make the generic algorithm, the documents on the generic algorithm as clear as possible so that we can keep the additional requests to a minimum, that's what we...But we're aware that in some cases that may not be enough and we're preparing to respond to more detailed requests so *we hope they won't be massive*. It's the law, we make a point of being within the law and being *exemplary* in this regard."

What is performed in this interview is the dramaturgy of transparency-as-exemplarity that has been scripted by Etalab and taken as an opportunity for branding by DGFIP. As a member of the *theatre audience* that "engage with the performance to extract information" (Hilgartner, 2011, p.210), I would say that two elements are frontstaged in the account of the disclosing process given by Taillefer: he therefore performed an extensive information control (Hilgartner, 2011:209-210). Firstly, transparency is presented as the result of a game, an almost voluntary act only needing a commitment, just a way to perform the "spirit" of openness. Transparency is performed by the fiscal officer as an ethics of virtue attached to the DNA of the organisation: a "state of mind" part of their "culture", more than a "tradition": an "obsession". Here, the exemplarity is staged as the emanation of a code of conduct where transparency is a constraining but positive dogma. Concomitantly, Taillefer's presentation of transparency-in-the-making tends to backstage many elements: the pressure of d'Aiglemon's contestability; the impossibility to give him an individualised response; the fear to have a reputation damaged; and the role of the CADA in pushing DGFIP to disclose. These omissions tend to hide the consequentialist vision of transparency: it is a mechanism for enhancing accountability and not simply a tool for "pedagogical purposes".

Secondly, Taillefer presented the development of disclosure as hard work ("it has been a work of several months, we've also worked hard with Etalab") but the delegation process is not unpacked. It appears obvious that

Rabourdin statements highly contrast with DGFIP's point of view as expressed during this web TV show. For her, it took nine months to disclose the housing tax because of DGFIP slowness, incompetencies and the fear of unexpected consequences of disclosures. Finally, transparency is presented as a paternalist pedagogy (“we have to work on dismantling this process for *pedagogical purposes*”) while it is often lived by citizens as a symbolic way to repair an unfair decision-making they suffered from — to treat citizens as docile pupils here is another way to pacify contestability.

Inside *the theatre of transparency*, the pacification effect of performing exemplarity is an attempt by DGFIP to orient the evaluation of transparency performances before witnesses can have their part — the preemption of a role that must be performed by an audience. What is problematic is that DGFIP appears as its own evaluator of transparency performances and the journalist is a passive performer that did not mention d'Aiglemont activity as a witness and watchdog. As commentators-evaluators of disclosures, Etalab and DGFIP participate in “framing situations collectively and building responses to them” (Hilgartner, 2011, p.211). This framing is achieved through the appealing narrative that exemplarity is simply an expression of DGFIP's respect for the “spirit” of the Law. And Taillefer's performance tends to exhibit an “imaginary world in which organizations and people happily and altruistically share data” (Peled, 2011, p.5). This joy of disclosing positioned the “televised” transparency *as a spectacle*. In his book *The Seductive State* studying the transformation of the French governmental public exposure at the beginning of the 1990's, media theorist Régis Debray had already identified such effect of televised theatricality as a specific “recoil, cooling and composition” (Debray, 1993, p.35), a duplicity staged by an “heroisation of the image” (p. 53). An heroisation coming from the TV show setting and feeding the dramaturgy of exemplarity.

Finally, Taillefer's discourse was also oriented towards the future of algorithmic transparency. Taillefer opened the possibilities for new acts of the

transparency theatre. Indeed, he explained that full accountability (as the capacity to give an intelligible individualised explanation of an algorithmic decision-making) is to be postponed: “We are at the beginning of a process that will lead to greater transparency, this is the generic stage, but the next stage is the possibility of having individual and detailed information on what has been done concretely in the case of an individual.”

On the contrary, a watchdog such as d’Aiglemont would claim that full accountability must already be a reality. As a way to avoid massive citizen contestability, Taillefer repeated the advice given by Bixiou: “the documents on the generic algorithm as clear as possible so that we can keep the additional requests to a minimum.” Here we witness the benefits of the negotiation meeting between the two administrations and Etalab’s role in orienting the conduct of algorithmic transparency. But as we have seen in the previous section, the general information provided by the tax documentation does not clarify the VLB. There is therefore a gap between the performed exemplarity branded in this web TV show and the reality of the disclosed documentation.

At the individual level of Taillefer and Baudoyer, the performances of this meeting was a training to improve their capacity to deal with the media pressure, following Hilgartner: “Such efforts express theatrical self-consciousness because they indicate that actors are making concerted efforts to improve future performances directed at the media and to monitor how they themselves are appearing in it” (Hilgartner, 2011, p.212).

Indeed, for the two organisations, experimenting performances in front of a media is also a way to build relationships with a journalist that could be a potential partner in shaping the appearance of transparency settlements. The magazine organising the interview, *Acteurs Publics*, claim to be “at the heart of the State and its satellites”<sup>49</sup>. With a website, a web TV, an online and print

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49 - See online: <https://www.acteurspublics.fr/page/a-propos> (Accessed: 24 September 2020)

magazine, the targeted audiences of the media are civil servants. Contrary to Victor d'Aiglemon's publication, it is not situated as a counter-power to State misbehaviours. This test of positioning in front of the media by the two organisations is also visible at the end of the interview when Baudoyer stated that Etalab may also help to empower citizen in the future: "New rights are good, but society must be able to seize them, and it's not one of our primary missions, but we must improve the ability of public service users to say "I have new rights, how can I seize them or not?"

In talking in front of the media, Baudoyer communicates to civil servants and citizens his intention and positioning. But again, what are Etalab "primary missions" then? Chapter 4 showed how Etalab was the key actor that set up and nurtured the topic of algorithmic transparency. Chapter 5 demonstrated the task force advising role of negotiating and scripting transparency so that full accountability could be prevented. This chapter described Etalab as the agent managing transparency on behalf of DGFIP. And in this TV show, Baudoyer wants to improve citizen capacities to contest. Regardless of its political role, it seems like Etalab tries to be an unavoidable performer of the *transparency theatre*. This inconsistency in the positioning nevertheless resulted in the pacification of contestability.

Before concluding this thesis I will sum up how exemplarity sustained the processes of delegating, dividing, and gamifying transparency performed in order to pacify contestability.

## **Conclusion**

Chapter 6 foregrounded many shifts in the conception and conduct of transparency: from its roots as a bureaucratic ideal, actors pursue it as an



innovative exemplarity infused of competition; from an emancipatory mechanism pushing for fiscal justice, it has been staged through a set of performances disconnected from accountability; from a practice of the administrative law, it has been transformed into an experimentation using digital devices of disclosure.

Again, the intuitions from organisational theorist Haridimos Tsoukas are crucial to understand the described processes, particularly when he is suggesting that “application of timeless propositional logic [like transparency] to time-dependent phenomena [such as the production of organisational reflexive accounts] leads to paradoxes [or counter-intuitions]” (Tsoukas, 1997, p.7). In other words, the effect and belief of an immediate transparency coming with the housing tax source code or simulator contrast with the time it requires to produce an argumentative, intelligible and personalised accountability of an organisational system through an FOIA mechanism. While *transparency as a bureaucratic duty* is slow, *transparency as an innovative exemplarity* seemed more quickly to produce. Ultimately, the practice of transparency will be rewarded into the Open Data “rankings” but it will also instantiate a division of transparency provision, a spectacle of exemplarity, a theatrical dualism resulting in the pacification of d’Aiglemont’s claims.

If I now reconstruct the emergence of algorithmic transparency in French administrative contexts, I will first say that what we have seen in chapter 4 is that the institutional landscape, the missions and interests of transparency practitioners were in favour of positioning algorithms as transformative forces of the State. Nevertheless, ministries such as the DGFIP faced a challenge between silently developing policies with algorithms and taking accountability seriously. Chapter 5 made clear that since legal obligations created to secure algorithmic accountability are not accompanied by strong sanctions, transparency initiatives are not necessarily going to achieve this end. Since pressures for accountability are low, Chapter 6 described how the *theatre of*

*transparency* opens a space to position the concept as an exemplary practice and a qualitative attribute bypassing the justice that can be given through the Right to Explanation.

The circulation of the exemplary narrative helps to forget the quest for a full accountability using different resources and techniques. With the press release, this rhetoric was part of a dispositif of visibility management aimed at backstaging controversial information. Here, exemplarity attracts attention and blocks the capacity to scrutinize. The simulator was seen as a seductive and exemplary tool because of its interactive quality and the dream of personalised explanations coming with its use. Moreover, the witness d'Aiglemont was sensitive to the rhetoric of exemplarity because it gave the impression that DGFIP was aligned with the requirements of the regulation. Finally, the setting of the web TV show reinforces the heroisation of performers, their will to seduce audiences through a dramaturgy of exemplarity positioning transparency as an ideal or virtue.

Along the description of these events, the conduct of algorithmic transparency takes the form of a general *delegation* of interpretation, from an administration to a task force, then from a task force to citizens. What the audience is witnessing is a divided transparency: partial accounts of algorithms maintaining the housing tax as a public secret. Facing this impasse and knowing that a source-code is only a very technical account of an algorithm, Etalab gamified transparency in providing a simulator of the housing-tax. The general effect of all the transparency devices is to have *pacified* citizens' capacities to contest. This has been possible thanks to the backstaging of key controversial information and the fragile possibility gained in experiencing the simulator to have a broad recipe of the tax calculus.

As rightly noted by political scientist Yaron Ezrahi (1990), transparency devices depersonalise political power. Similarly I will argue that the delegating

process described in this chapter stressed this depersonalisation, the detachment of administrations and the escape of accountability fulfillments. Since the allocation of responsibility is troubled, Etalab experienced the stress of the disclosing management. While in the *theatre of authority* this depersonalisation came from the neutral, rational and objectifying culture of disclosure where the information made public are decontextualised, in the *theatre of transparency*, this depersonalisation is accentuated and displaced by the delegation process where transparency is not even managed by the contested administration.

In the context where there is a lack of care for accountability, the focus of transparency can then be displaced to other aims, it gives a time to prepare and anticipate options, relegate accountability in the background, and expelled the theatre of transparency into other directions of political actions (i.e. the creation of simulators). Indeed, the depersonalisation is a displacement that permits the “translation across domains” (Strathern, 2000, p.314) from accountability to exemplarity since the agent of delegation, here Etalab, is the legitimate task force capable of operating experimentations, branding exemplarity and framing the limits of accountability thanks to its expertise in interpreting the regulation.

An intermediary and agent of depersonalisation like Etalab was absent inside the scientific *theatre of proof*, whereas in the liberal-democratic *theatre of authority* what was foregrounded is the performances of politicians not the advising role of special task forces. If all actors in the *theatre of proof, authority* and *transparency* seek to achieve credibility and authority through performative actions, the *transparency theatre* differs because its disclosures are not publicly demonstrating knowledge as in the previous theatres: they simply communicate information without the full range of intelligible explanations and justifications. The justifications that needed to be provided by the FOIA response to d'Aiglemont are replaced by a large communication of a source-code and a

simulator. In this move, algorithmic and data rights are in competition with open data logics of disclosure. As a consequence, full accountability is prevented and contestability is pacified in delegating the labour of exegesis and demonstration to the citizens.

## Chapter 7: Conclusion

In this conclusion, I will summarise the key claims made throughout the preceding chapters and reflect on the four methodological contributions of my thesis: the performative analysis of transparency; the joint study of performances-as-stagings and their performative effects of transformations; the post-digital approach to ethnography and the analytical device of the “transparency theatre”. To synthesise my findings and further draw out their implications, I will start by presenting four propositions that specify how to understand the conduct of transparency politics: *algorithmic transparency is not simply an ideal but a performance; algorithmic transparency performances do not just reveal but transform; algorithmic transparency is not straightforward but negotiated and scripted; algorithmic transparency is not only a duty but a claimed exemplarity.*

### **Algorithmic transparency is not simply an ideal but a performance**

As I discuss in Chapter 2, defining transparency as an ideal, value or virtue (see for example Schudson, 2015, pp.22–23) limits our understanding of the complex socio-technical practices occasioned by its implementation in policies and devices (Barry, 2010; Harvey et al., 2013). In describing how transparency ideals are practically performed, we can ask important questions about the alignment and misalignment between the normative claims of transparency and its organisational and technological implementations.

For transparency practitioners as well as for researchers, considering transparency as a performance and not as an ideal can be a tactical decision. As I discuss in chapters 2 and 3, the definitions of transparency are multiple (Alloa, 2018, pp.31–32) and since public policy actors are not aligned on their visions of the concept (Jobin et al., 2019), it seems opportune to study the consequences of

its multiple manifestations. In addition, because the concept of transparency is evanescent, the study of its public performances helpfully provides tangible materials for pragmatic improvements and further investigations. Moreover, if public policy actors would be enabled to acknowledge the performative nature of their actions (as when Etalab expresses a theatrical self-consciousness), then a debate about what kind of performances might be beneficial to settling algorithmic transparency struggles could be opened with civil society organisations.

Many governmental and academic discussions about the agential power of algorithms have opened up potentially endless philosophical debates about the “true” meaning of transparency (Jobin et al., 2019). My own view is that reformist efforts to cope with algorithmic harms will not necessarily be facilitated by more detailed definitions. Instead, they would benefit from a richer understanding of how transparency performances are configured. Rather than seeking to resolve the inherent limitations of prescriptive codes of conduct or ethical guidelines (Amoore, 2020, pp.5–7), in situating algorithmic transparency as a performance, I insist on the contingencies of its conduct. To name a few: achieving transparency is a difficult quest for explicitness; negotiations of transparency may fail; the act of disclosing is full of improvisations; expert audiences often notice the attempts to stage disclosed information, and; the transformative effects of disclosures are difficult to anticipate. I suggest that collectively questioning and investigating these contingencies is a path towards a reorganisation of transparency politics. This approach could feed future research dedicated to notions similar to transparency which share its magical and sublime connotations — pervasive concepts invading the politics of technology such as “ethics” for example (See Metcalf et al., 2019; Danaher, 2019; Rouvroy, 2020).

Extensive scholarly work on transparency approaches the concept as a political ideal to be evaluated and verified through normative lenses: does

transparency lead to more accountability and public trust? By contrast, the performative approach I adopt and develop in my thesis is sensitive to the framing and transformative effects of transparency. In short, studying transparency as a performance opens several questions about its transformative effects, while approaching transparency as an ideal confronts us with problems of adequacy, leaving us under-equipped to navigate through the gaps between the meaning of a vague ideal and its fragile practice. Furthermore, once we unpack transparency performances, we can investigate not just the configuration of what will be made public but also how an environment gets transformed under an intensive performative regime.

### **Algorithmic transparency performances do not just reveal but transform**

Beyond the communication of new knowledge to audiences, transparency is transforming actors, issues and more generally the field where it is practiced. Indeed, in describing the performances of transparency undertaken by Etalab, Chapter 4 has shown how the task force gained a new position, legitimacy, expertise and sense of pride as a public policy actor capable of managing algorithmic issues through innovative experimentations (i.e. the housing tax simulator). Moreover, under the transparency regime of the Right to Explanation, the problem of unfair administrative decisions has been transformed into an issue of the participation of algorithms in decision-making. The concept of the “algorithm” has then been situated as a heuristic device helping to question bureaucratic procedures. Mapping and questioning the transformations provoked by a transparency initiative (re)opens questions about the technological conduct of State organisations (Agar, 2003; Alauzen, 2019; Dencik and Kaun, 2020), the role of infomediaries and task forces (Carter, 2016) as well as the uses of machinic metaphors as devices triggering State reorganisations (Ezrahi, 1995). While my study was focused on “algorithms”,

studies of the digitalisation of liberal democratic governments could additionally benefit from this focus on transformations in directing their attention on the relation between the materiality and metaphorical uses of notions such as “platform” or “blockchain” (i.e. O’Dwyer, 2016; DuPont, 2017).

If transparency is transformative, it also means that transparency initiatives are not only a *reactive* response — a staging effort defensively responding to previous accountability failures — but also a *proactive* practice seeking a change in objectives and modes of action. Unpacking the transformative nature of transparency is important because, as I have shown for the case of Etalab, the provoked reorganisations often end up reinforcing the organisational agenda of actors. In becoming an actor of algorithmic transparency, Etalab gained a new honourable status as a task force committed to the democratic virtue of transparency. As beautifully summarised by Marilyn Strathern: “there is nothing innocent about making the invisible visible” (2000, p.309). In short, transformations generated by transparency initiatives can double as strategies where transparency is a trojan horse to develop and manage organisations (Flyverbom, 2019). To summarise, beyond the “right to know” and claims for more accountability, the performances of transparency are creative forces orienting states of affairs in new ways. The proactive activity of transparency and the attempt to order the borders of what will be made public is achieved through a process of negotiation and scripting.

### **Algorithmic transparency is not straightforward but negotiated and scripted**

As I discussed in Chapter 2, transparency is generally understood as the facilitation of an easy access to knowledge, a form of bottomless disclosure fed by an information liberalism which posits that accounts need to circulate endlessly (Tsoukas, 1997). This simple vision of transparency depicts it as a



direct and immediate act, a simple form of communication or mediation, a matter of data logistics. If we approach transparency in these simple terms, we are led to believe in the political efficiency of disclosures. In contrast to this, bearing in mind the way disclosures are framed and instrumentally used helps us to consider their potential consequences. In this thesis I have shown that making things public is not an easy task and requires a considerable set of discussions, anticipations, and compromises. More precisely, I argued that *negotiation* and *scripting* were two specific performative modes used by actors to organise the practice of transparency as something doable and useful in view of their organisational agendas. Describing the negotiations and scriptings of transparency can enable further investigations into the objects and techniques through which arbitrations are conducted: possibilities offered by legal and technological devices; the efficiency and authority of certain expertise in orienting discussions; the exploitations of ambiguities in citizen demands; or finally, the use of time to speed up or slow down the pace of disclosures.

Distancing ourselves from the sublime vision of transparency as a straightforward communication of information, we can foreground the dialectic nature of transparency: the fact that performances could be oriented towards a seductive revealing or towards the nurturing of secrecy and ignorance. Beyond the easy claim that public policy actors are practicing information retention, specifying how negotiations and scriptings are achieved will give us empirical insights into the practical and strategic framing of secrecy and attempts to maintain ignorance. This attempt to impress audiences and seduce citizens with partial accounts is at the heart of my fourth proposition, which posits that transparency is today less seen as a bureaucratic duty which supports the enhancement of accountability but is increasingly presented as an innovative exemplarity.

## Algorithmic transparency is not only a duty but a proclaimed exemplarity

With this last statement, I want to foreground the idea that transparency can *no longer* be seen as a duty because of the impossibility of achieving accountability. However, to say this is also to offer a concealing commentary insofar as it suggests that in some circumstances, transparency is not *anymore* seen as a duty and more precisely taken as *an opportunity* to proclaim exemplarity. As we have seen in chapter 5, if the commitment to accountability is forgotten or prevented, this can be an important signal that the relation between transparency and accountability is not viable anymore. Considering the disconnection between these two notions is crucial if we are to adequately evaluate a pervasive theory of change of transparency advocates, which often presumes that transparency always reinforces accountability. The vigilant evaluation of the connect or disconnect between performed claims and their true achievements can be repurposed for the study of other (dis)connections, for example, the gap between claims of accountability and the improvement of trust (Corsín Jiménez, 2011).

Specifying what the disconnection permits and generates, I then propose, is a productive step to initiate inquiries into the transformative power of transparency. As I have shown in Chapter 6, when sanctions for not respecting the duty of accountability are low, this opens a wide field for actors to envision how to discursively brand their performances. Using the rhetorics of exemplarity gives them a new motivation and a persuasive concept to claim in front of citizens that transparency is achieved. While Etalab and DGFIP could have been more critical about the limitations of transparency devices or more cynical about their attempts to limit disclosure, they preferred to see the practice of transparency as a way to develop experimentations (i.e. developing a

simulator). Following Ian Hacking in saying that “objectivity is not a virtue: it is the proclaimed absence of this or that vice” (2015, p.26), similarly, I would say that “transparency is not a virtue: it is a proclaimed exemplarity hiding the vice of nurturing secrecy with a commitment to innovation”.

Now that I have presented the four key contributions of my dissertation, I would like to come back and reflect on the opportunities and benefits opened by the four methodological approaches I developed throughout this thesis: the performative perspective on transparency; the crossing of STS lineages working on performances and performativity; my proposal of post-digital ethnography; and the limits of using theatrical metaphors.

### **Evaluative vs. performative approaches**

In the methodological chapter 3, I presented two different approaches for the study of transparency. The first one was the evaluative stance which seeks to verify and evaluate the political efficacy of transparency performances in terms of the reduction of information asymmetries, improvements of accountability or public trust (i.e. Taylor and Kelsey, 2016). The second one is a performative approach sensitive to the theatrics and unexpected effects of transparency (i.e. Albu, 2014). In this conclusion, I will reflect on the joint use of these two approaches, how they reinforce each other and also produce different findings regarding the conduct of transparency.

Firstly, adopting an evaluative approach aligned with my collaborators at Etalab and as such helped me to access spaces where transparency was negotiated. Indeed, transparency practitioners naturally adopt an evaluative stance as they try to anticipate the effect of their disclosures. Envisioning what actors think and getting a sense of their strategy was a way for me to become a

temporary member of the organisation, a manner of gaining mutual trust and tacit understanding of organisational agendas. Here, the evaluative approach reinforced my performative inquiry because in practicing the former I was able to discern the rationale and constraints that informed certain kinds of transparency performances. Following the actors enabled me to provide a *practice-based account* of how disclosures are framed. Here, the evaluative stance reinforced the performative one because the negotiations of transparency are in themselves practical performances involving different types of stagings (i.e. performed ignorance of algorithmisation, curation of information).

My second point is that, inversely, the performative stance can also reinforce the evaluative posture because being sensible to the theatricality of practice provides a practical way of accounting for how transparency is achieved or whether if it is achieved at all. Since evaluative approaches seek to verify if transparency transforms a state of affairs, knowing how performances are configured may prove to be very useful. However, contrary to what can be understood with the evaluative attitude, the reasons of success or failure unearthed by way of a performative approach are not information-driven — they do not concern the depth and quality of disclosure — but involve directing attention to different dimensions of a communication act: discourses, the *mise en scène* of identities and disclosures, or the use of time as a resource to order the rhythm of disclosures. Put differently, paying attention to the disparate dimensions of a performance can help to surface the many characteristics participating in its success or failure. Moreover, getting away from a simple evaluation of information access paints a richer picture of the doing of nuts and bolts of transparency.

Finally, a performative approach also proposes a different style of research than what the evaluative strategy entails. For example, the performative stance shows that citizens, too, are performers (Goffman, 1959;

Hilgartner, 2011). As I described in Chapter 4, citizens need to demonstrate their motivations and stage their professional identities in order to configure a certain context in which their demand will appear credible. In contrast to this, an evaluative approach mainly sees politicians or organisations as practitioners of impression-management. Consequently, the two approaches consider the process of transparency differently, the evaluative tends to see transparency as a rigid procedure facilitating information access and control while the performative one unpacks the complex layers of stagings.

Indeed, since the performative mode is focused on practices and making, I naturally inquired into places of negotiation, framing, planification and scripting of transparency. Going “backstage” was crucial to delineate the configuration of transparency performances. Inversely, the evaluative stance studies things from the abstract position of the audience. In this latter case, the researcher often acts as an ambassador of the citizen which causes problems of representativeness since researchers are expert witnesses and not lay citizens. At the end of this evaluation process, the researcher can only advocate for better access to information, an improvement of citizen literacies or more normative regulations. While these progressive propositions are important, the evaluative researcher will lack empirical materials to specify how transparency performances are actually achieved in day-to-day organisational contexts, how they are informed by certain type expertise and framed by very specific uses of devices. A performative attitude can address this gap with insights into the many features, dependencies, constraints and opportunities shaping the contexts in which transparency performances are configured. In my study I implemented a performative approach by using a theatrical vocabulary and an attention to their transformative/performative effects, and I discuss below how this joint register on “performances” and “performativity” furnishes important resources for the elucidation of transparency politics.

## Performances-as-stagings vs. performative effects of transformations

The work presented in this thesis sits at the intersection of two lineages, one sees staging actions as performances and the other understand them as having a performative effect: a generative provocation that transforms a state of affairs and the apparent stability of an object of knowledge — for example, an algorithm. The first lineage of research is sensitive to the theatricality of practice (Goffman, 1959), and emerges from historical and social studies of science (Latour, 1984; Shapin and Schaffer, 1986; Hilgartner, 2000) and research on demonstrations of technological invention and use (Smith, 2009; Coopmans, 2010; Perriam, 2018, Cornfeld, forthcoming). Some researchers working within this lineage came to consider transparency performances as configured “theatres” for displaying evidence and triggering public experiments (Ezrahi, 1990; Law, 1994; Marres, 2012; Barry, 2013). These interrelated inquiries on theatricality and demonstration form a single lineage through their shared emphasis on understanding practices of knowledge and technology demonstrations as *performances*. Drawing on the Goffmanian back and frontstage ordering scenes of appearance in everyday life (Goffman, 1959), my work was therefore situated among other STS ethnographies of impression management taking place in organisational context (Law, 1994; Hilgartner, 2000; Neyland, 2007a; Barry, 2013). Put differently, in this tradition “performances” are considered as persuasive forms of showing and hiding information: the STS literature inspired by Goffman refers to them as “dramaturgical actions” (e.g. Hilgartner, 2000).

The second STS lineage I contribute to is rooted in the idea from John Austin that rhetorical utterances do what they state and bring to life what they name (Austin, 1975). It sees performances as performative-provocative events bringing reality about, a coming into being actualised in practice. That type of “performative” then has ontological effects. It is a pervasive claim which has

especially occupied philosophy of science (i.e. Pickering, 1995; Barad, 2007), economic sociology (i.e. Callon et al., 2007; Muniesa, 2014) and recent studies on the politics of valuation devices and neoliberal competition (Stark, 2020). What this second lineage helped me to foreground are the specific effects of transparency narratives and accountability devices in forcing the emergence of objects to be made legible: algorithms. Here, organisational realities are brought to existence or transformed through the use of instruments and the way they push objects or things to surface. A “performative device” then has ontological consequences, what the device is supposed represent is also transformed and such outcome of a performative process does not simply equate with the staging mechanisms emerging with Goffmanian types of “performances”. Nevertheless, in my study, the performances of transparency (responses from CADA and courts to FOIA requests) do have the performative effects of generating the existence of algorithms.

To to be more precise about how I have specifically used the terms “performance” and “performative”, in my study, transparency performances are objects of study (disclosures) while performativity is the name of a processual and often unexpected consequence of these performances: the fact that administrative procedures have been reframed as algorithms without specifying them as digital objects. My contribution to the Goffmanian understanding of stagings is to have proposed three modes/styles of performances — self-presentation, controversy, provocation — in which the latter enact a performative action (regulating algorithms provokes their appearance) and where the formers are stagings performed through distributed efforts to stage the identities of performers and the controversial drama at stake. In my study, the Goffmanian approach to performances and the material/ontological effect of the performatives needed to be studied together as different but complementary methods.

Delineating these two lineages and the differences between “performance” and “performative” found within them, clarifies what has

previously often been confused (on this conflation, see McKenzie, 2001, p.10 and; Muniesa, 2014, p.7). In general, when both concepts are used interchangeably, it is understood that all types of performances broadly understood as theatrical actions — including Goffman's stagings — have performative effects. This radical stance where reality and society are the outcome and consequence of performative practices has been developed in STS with the material-semiotic approach (e.g. Law, 1984; Law and Allasuvuola, 2019, p.9), the redefinition of the social link by Shirley Strum and Bruno Latour (1987) and the “ontological politics” of Annemarie Mol (1999). Other STS scholars privileged the use of the performative language and the description of “performativity effects” while acknowledging the existence of other approaches such as the Goffmanian one (e.g. Muniesa, 2014, pp.11–12; Koltun, 2015, p.18). However, few researchers consider how these two lineages could be joined together and put to work on a single object of study — except tentatively Jon McKenzie (2001, p.41) and more explicitly Will Davies (2020).

My choice to focus more on the Goffmanian types of disclosures rather than on their performative effects was motivated by the specificities of my case study and the temporality of my fieldwork. Indeed, what I observed in the field necessitated a theatrical approach sensible to the dramaturgy of issues, the staging of actions and the self-consciousness of actors reflexively knowing their roles as performers. Contrary to many STS studies on performativity inheriting from the economic sociology of Michel Callon or Donald MacKenzie (2006), mine could not solely be focused on the role of (market, legal or technological) devices as agents of performativity. As Daniel Neyland suggests, simply studying the performativity of speech and devices “might problematically narrow the focus for analytical action” and prevents us from seeing the broader “narrative” produced with the Goffmanian types of performances (Neyland, 2019, p. 127). Nevertheless, while I was able to notice the performative effect of the Right to Explanation as a legal device forcing algorithms to emerge as problematic entities, assessing the full consequences of this surprising event would require



another study. In other words, it was too early to completely describe the possible transformative effects and normative consequences provoked by the staging of administrative procedures-as-algorithms. Performative effects of the transparency performances are not known in advance, and in part rely on the success of the performances themselves. Only time will tell if the seductive figure of the algorithm will generate new policy agendas and populate visions of the French State-as-a-Platform<sup>50</sup>. For now, I will review and expand the specific vision of the algorithm as a “post-digital entity” which pushed me to develop a specific ethnographic program and performative approach.

### **Ethnography of the post-digital vs. post-digital ethnography**

In this thesis, I developed and experimented a post-digital approach that seeks to unpack the discursive nature of technological controversies and the political strategies performed through the naturalisation of concepts and processes grounded in digital culture. What leads me on this path of research is the trajectory through which the meaning of the notion “algorithm” was reconfigured in French public policy discourses. If an “algorithm” is commonly understood as a digital object whose meaning was established and regulated by the expertises of computer science and software engineering, I observed a “designification” of its initial understanding as a digital object (Pfaffenberger, 1992, p.308). This surprising phenomenon troubled the materiality corresponding to its denomination. The ambiguity between what can and cannot correspond to an algorithm then generated an interesting empirical problem: does a figured algorithm always have a clear ontological status? Instead of settling the meaning of what an “algorithm” is, I proposed to investigate the entangled formation of algorithmic figures as the manifestation of a productive

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<sup>50</sup> - For discrete clues on this concern in recent ethnographies of French tech policy, see the work of Marie Alauzen (2019, p. 126) and Sarah Labelle (2020, p.188).

societal logic where machinic metaphors and social constructions of technological reality are entangled. In the legal context where a clear definition of algorithms was not provided by the French administrative law, the meaning of algorithms have been “adjusted” to the needs of regulatory authorities (Pfaffenberger, 1992, pp.199-303). Indeed, what I then called a “post-digital algorithm” emerged from CADA’s responses to FOIA requests: it is an administrative procedure understood through the formalism of a rule-based algorithm -as-recipe.

In addition to the peculiar legal context of my inquiry, the specificities of my case studies justified the development of a specific post-digital approach. Indeed, the housing tax and the mechanism allocating daycare places are not what we used to normally call “algorithms”. Nevertheless, using the figure of the “algorithm” to describe them became a catalyst to questioning classical themes of bureaucracy such as the proceduralism and opacity of decisions, the discretionary power of civil servants to apply a “procedure/script/algorithm” or the difficult orientation of datafied citizens in an information architecture of papers, technologies and organisations. Regardless of the concrete presence of material and digital algorithmic systems, their figuration inside public organisations became a discursive resource for problematisation, the amplification of bureaucratic problems and the quest for solutions. Moreover, since the actual codes or software operating the administrative procedures under study were difficult to access, what I could observe were discourses and practices shaping them as objects — hence “post-digital algorithms” — to be made transparent. I was studying a political situation where technical, computational terms shape understandings and the framing of specific actions as algorithmic. The post digital approach gives reality to these developments and is interested in its movements. Indeed, it was crucial to adopt a post-digital approach in order to inquire the transformative power of algorithmic figures inside French public organisations in a configuration where transparency devices did not simply display new information but performatively reorder the

strategies and conduct of practitioners through new forms of management perceived as “algorithmic”.

In foregrounding our post-digital condition I do not want to indicate that we have entered a new era “beyond” or “after” the contemporary digitised and datafied society (Cramer, 2013). To be clear, the post-digital is an analytical attention not a period (Cox, 2015). If the post-digital is not “beyond” and “after” computational realities, its modes of thinking helps to navigate “through” their different visions, in the transversality of their disparate intensities, co-presences and the circulation of algorithmic figures. Following the editors of the 2016 Transmediale conference reader, in engaging with the post-digital I pursue “a temporal and critical distance from the digital, while remaining partly defined by it” (Bishop et al., 2016). Certainly, typical epistemologies, organisational logics and technological practices belonging to the digital continue to reshape our world. But while the post-digital aesthetics (Berry & Dieter, 2015. Bishop et al., 2016) situate computational infrastructures as material agents of this transformation, my contribution in post-digital research lies in emphasizing the transformative power of algorithmic figures in imposing the computational logic of algorithmisation as the “new normal”. For example, reframing administrative procedures as algorithms risks putting in circulation the belief that public services could necessarily be automated, that they are operated through intensive datafied processes requiring the mandatory presence of data scientists.

To conclude this section, I would like to develop two possible interpretations of my post-digital approach. The first one is to consider the “ethnography of the post-digital algorithm” as an empirical strategy focused on the explanatory qualities of the concept and the way it can transform a field. Such an approach could be situated as part of a broader style of research labelled as “algorithmic refraction”: an empirical program studying how “people position themselves with respect to algorithms and seek to enrol them in their institutionalized ways of doing things” (Christin, 2020, pp.20–21). Indeed, the

post-digital quality of the algorithms I studied was a reaction from regulatory authorities and a way for administrators to specify the presence of these new entities — to enrol them — in their day-to-day job. In this context, an ethnography of the “post-digital algorithm” is an approach that focuses its efforts on analysing “the chains of representations and practices that travel across algorithmic systems” (Christin, 2020, p.20) and how objects or processes can suddenly be attributed algorithmic features.

What I described as the “ethnography of the post-digital algorithm” is the approach I privileged in this thesis. A second and more speculative interpretation of my post-digital approach — what I call the “post-digital ethnography” — consists in going a step further and perform ethnography through post-digital concepts, objects, effects, tools and infrastructures. To give an example of a proto “post-digital ethnography”, when STS scholar Malte Ziewitz proposes the following protocol to workshop participants he wishes to study the algorithm as a “post-digital” figure ordering practical reasoning: “go on a walk, guided not by maps or GPS but by an algorithm you devise ad hoc to give directions” (Ziewitz, 2017, p. 2). With such experiment, Ziewitz was able to map the troubles that come with algorithmic reasoning: the undiscussed problem-space established once an algorithm is situated as a solutionist tool; the transcription of social events into a procedural language of instructions; the difficulty to account for algorithms or mitigate their unethical agencies; and the iterative work of adjusting and changing procedures in front of surprising phenomena (Ziewitz, 2017, p. 10). In this experiment, the post-digital ethnography consists in thinking through the frictions between the making of a digital object — an algorithm-as-recipe to be later implemented in a software — and the banal contingencies of everyday life.

While many approaches to digital ethnography privileged a study of digital objects per se (Duggan, 2017, p.4), a “post-digital ethnography” studies on a more meta level how computational thinking and technologies are ordering the world through specific logics, modes, narratives, forms of organisation, and

other methods of folding and unfolding what counts as digital mediation. As a method, a “post-digital ethnography” provides *resources* — experimental strategies and poetics — and *attitudes*, for example, a specific analytical focus to the transversal power of computation and an affective mood sensitive to its surprising enactment. Before finishing this thesis with a proposal to expand the theatrical approach to other studies of accountability practices, I would like to present the risks, limits and difficulties coming in using a theatrical language.

### Limits of the theatrical approach

Considering the strong “anti-theatrical prejudice” of western thought (Ezrahi, 1995, p.300), many could think that theatrical acts are inherently performed to deceive, cheat and hide information in plain light. The circulation of machinic figures such as the algorithm combined with a theatrical narrative might then have a strong effect of *maintaining the dualism of the theatre*: the connotations of these figures justified the separation of a *fronstage* made of visible and spontaneous performances of transparency contrasting with a *backstage* where algorithmic decision-making could still occur. As Ezrahi brilliantly exposed it: “theatricality as the vice of deliberate dissimulation, thus, has facilitated the separation of a moral domain of voluntary conduct from what could emerge as the domain of involuntary amoral mechanical behavior. Applied to social behavior, the metaphor of the theater thus implicitly facilitated the segregation of a sphere of behavior where machine metaphors like the self-regulating mechanical clock could be applicable” (1995, p. 311).

In short, algorithms are problematically naturalised as autonomous “objects of ignorance” (Lange et al., 2018) while performances are seen as spontaneous acts situated on a spatial stage separated in two by the “veil of transparency” (West and Sanders, 2003, p.26). My thesis counteracts these visions in showing that: algorithms are better understood as everyday

infrastructures dependent on public organisations and civil servants; performances are sometimes not well rehearsed; and scripts are not always followed. Moreover, in STS fashion, I consider the theatre not as a geographical place organised through the strict relational topology of a back/front but as a configuration of actors, actions, discourses, temporal processes and devices. This configuration does generate an environment, but the STS ethnographer knows that backstages are possibly endless and performers are not always who you think — for example, genuine demands of transparency require the staging of citizens identities and motivations.

However, in using the theatre as a heuristic, my analytical focus was more on actions-as-performances — staging-in-the-makings, transformative movements, their successes and failures — and less on the political context, climate and other external causes colouring these performances. My choice not to inquire about these contexts was motivated by the fact that other French ethnographers were already doing this work while I was developing my project (Alauzen, 2019. Labelle, 2020).

Finally, situating the multiplicity of theatres operating in my fieldwork — the theatre of proofs (Latour, 1984. Shapin and Schaffer, 1986), authority (Ezrahi, 1991), and transparency — is a non-evident task. To clarify, as I explain in the literature review, each of these instances is a different configuration of actions. Since they inherit from one another and can overlap in the same situation under study, there is a temptation to carefully historicise them (Perriam, 2018, p.255). However, while they first emerged in historical and sociological studies of science, I would prefer to see them as ideal-types or modes of staging that resurface in other contexts such as practices of witnessing in digital environments (Woolgar & Coopmans, 2006) and the intensive use of science and technology by liberal-democratic politics (Ezrahi, 1990).

If I now try to distinguish the different theatres I would say that while the theatre of proofs and authority were naturally orchestrating efficient demonstrations of new knowledge, the theatre of transparency configures a

phantasmagorical situation where citizens have a natural critical gaze and adequate literacy sufficient to make disclosure intelligible. This abstract situation lacking demonstrations could be intentionally created by actors or simply a manifestation of a lack of care for the development of an access and literacy of algorithmic knowledge. While in the former theatres, witnesses were active spectators enrolled in virtually seeing experimentations through visual evidence, in the latter, the witness of transparency performances is envisioned as an autonomous subject, an entrepreneurial citizen proactively digging and visualizing new knowledge (Birchall, 2017) and simulating the outcomes of algorithms (Chapter 6).

### **The theatre as a method**

As an archaic metaphor of a political configuration, the theatre remains a powerful analogy. These types of figures are nothing less than the heart of our cultural practices as Strathern, again, argued: “culture consists in the way analogies are drawn between things, in the way certain thoughts are used to think others” (Strathern, 1992, p. 33). Adopting an STS-informed approach in my study of algorithmic transparency led me to consider the performance of transparency as if situated in a “theatre” generating a dramatisation of technological issues (Pfaffenberger, 1992), the stagings and duplicity of actors (Goffman, 1959) and the use of technological devices as powerful props ordering the boundaries of what could be made public. I used the metaphor of the “theatre” as a term defining holistic and experimental performances involving numerous aspects of social interactions (i.e. face-to-face meetings, stagings through devices) and acknowledging the generative capacities of entities taking part in transparency efforts. More precisely, the *theatre of transparency* is a configuration for making things public and credible using discourses, *mise en scène*, instruments and a timely sequencing of disclosures.

I conclude by envisioning possible continuations that could use the theatrical language I have developed throughout the thesis. Indeed, envisioning the “theatre of X” as a method — where X is another concept than transparency — could be very productive for further research about performativity, infrastructures of knowledge production or the framing of secrecy. For investigating speculative “theatres of X”, this thesis provides a language: the idea that the experimental public performances are sustained by a *dramaturgy*, itself embodied and curated through *staging* mechanisms, technological *devices* and the *temporality* of disclosures. It offers four dimensions that could be repurposed, specified and transformed to suit prospective studies about the political force of appearance, the dramatisation of technological interventions, the construction of secrecy as an asset or the reshaping of organisations under new algorithmic forms of management. For example, as I am writing these lines during the outbreak of the Covid-19 pandemic, public policy expert Sean McDonald writes: “technology theatre, here, refers to the use of technology interventions that make people feel as if a government — and, more often, a specific group of political leaders — is solving a problem, without it doing anything to actually solve that problem. Contact-tracing apps are the breakout technology theatre hit of the COVID-19 response” (McDonald, 2020).

For McDonald, the “technology theatre” is a form of technological determinism masking the difficulties of facing a worldwide pandemic. Is the theatre of transparency not also a configuration where knowledge is protected, hidden and carefully distributed, a specific disposition of actors where incompetency is nurtured? Is the theatre of transparency what sociologist Linsey McGoey could call a theatre of “strategic ignorance” (McGoey, 2019)? Similarly, is the theatre of transparency not also a theatre of participation (Kelty, 2019) where citizen involvement in the creation of accounts is anticipated, measured and requested? Paradoxically, what is at the same time denied to citizens is the capacity to fully make sense of what is disclosed.



Finally, since my study is a story about the limitations of FOIA requests as a means to achieve accountability, is the theatre of transparency also a “theatre of failure” (Perriam, 2018) where the impossibility to demonstrate algorithmic decision-making is replaced by the branding of exemplarity? Here, my inquiry opens up questions about the productivity of failure and the maintenance of uncertain states of knowledge. More broadly, the theatrical metaphor could be useful for the dramaturgical analysis of everyday life and for unpacking the pervasive spectacle of tech and politics we are all witnessing as citizens of liberal democracies.

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