DIGITAL INSTRUMENTATION AND PUBLIC ACTION

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ABSTRACT

All European countries have implemented reforms aimed at 'dematerializing' public administrations and services. However, this reshaping of the public action model, based on increased use of various digital means and processes, has its problems. There is an abundant English-language literature on the subject, and this Introduction presents what we consider to be some of its major recent findings. This partial review enables us to link the contributions in this issue to some of the most well-established topics in this research field.

Keywords: public action, dematerialization, state of the art, instrumentation, digital.

All European countries[1], confident in the advantages that digitalization is expected to have for the development and application of 'transformative' policies[2], have introduced reforms to 'dematerialize'[3] public administrations and services[4]. In France, these same expectations have underpinned the public service reforms undertaken in recent years – the strategic nature of which was highlighted by the Covid-19 health crisis. These reforms were designed to develop action plans that would enable the state to reduce public spending and debt, improve working practices, enhance decision-making processes, and ameliorate working conditions for public servants. They were also intended to optimize the quality of services and user benefits. This reshaping of the public action model is therefore based on administrations' increased use of various digital means and processes (dematerialization of documents, platformization of services, sharing of databases, algorithmic processing, open data, blockchain, AI, etc.). These processes are however not problem-free and have triggered resistance since they are overturning the organization of state institutions, the professional practices of their agents, and the customs of their citizens (Fugletvei and Sørhaug, 2023; Lévy and Warin, 2019). Digital 'transformation', particularly when it affects public action, encounters obstacles[5], which this issue documents and examines from the perspective of sociotechnical devices and their 'related environments'.

Following on from a previous issue of *Réseaux* (Arsène and Mabi, 2021), the contributions in this issue, which are far removed from diffusionist, functionalist and utilitarian perspectives, examine the erratic deployment of this 'new' governmentality[6] that establishes digital technology as a socio-technical support for the 'modernization' of public policy.

The digitalization of administrations is de facto redefining the relationship with the state and opening up processes of government by instrumentation, dialecticizing social solidarities of public action and technical solidarities (Dodier, 1995). Understanding this type of coupling requires us to pay attention to the agencing of the means of state regulation, and to consider that public action is constructed on the basis of technical devices that materialize intentions, introduce systems of regulation, and define aims and content.

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[1] The European Commission is proposing a programme – Digital Decade – which puts forward 'reference trajectories' indicating 'the ideal path to follow every year' to develop 'resilient and sovereign digital infrastructures'. At global level, the United Nations also set up an E-Government Development Index (EGDI) in 2003, which uses a diffusionist approach to establish scores for the progress made by states in digitalizing their institutions.

[2] Dencik, 2022; Lim, 2020; Dunleavy et al., 2006.

[3] A term that has passed into common parlance, but which is rather inappropriate insofar as it urges us to think in terms of 'immateriality' when, in fact, the materiality of digital devices has never been as prevalent as it is now.

[4] Hofmann et al., 2020; Wimmer et al., 2018.

[5] Elimination of physical points of contact (Okbani et al., 2022; Faron, 2016), management of personal data (Pasquale, 2015), non-recourse to the law (Deville, 2023; Mazet, 2019), emergence of an increasingly disembodied 'platform state' (Bellon, 2022; Alauzen, 2021), etc.

[6] The work of Michel Foucault (2004) provides a basis for thinking about the technicization of power, its 'instrumentation' and the emergence of 'governmentalities' based on socio-technical devices that provide material support for interfacing state policies more effectively with citizens (avoiding constant negotiation and supervision) and thus making the guidance of conduct (prescription) and the social control of populations more robust (the ability to get things done is at the root of power).

Investigating the digital instrumentation of public action can thus take different forms, depending on whether we are interested in the innovation stage or the appropriation stage. For example, our inquiry may focus on the choice of instruments, by characterizing the motives and processes that led institutions to choose one *tool* over another (*negotiation* phase). It can also look at the nature of the tools that, in this case, are operationalized through digital devices, the *scripts* of which reveal specific socio-technical concepts of regulation (*incrementation* phase). Lastly, we may seek insight as to the consequences of the instruments employed, by paying attention to the various forms of use they generate and the habits they shift (Halpern et al., 2019). There are two phases to this appropriation stage: an *implementation* phase, which consists in introducing digital tools into the workspace of civil servants, thus giving them the status of production tools; and a second, *(non-)usage* phase developed by citizen-users. Thinking about the digital instrumentation of public action – whatever stage or phase we focus on – necessarily involves paying attention to the 'ontological heterogeneity' of the devices involved (Dodier, 2019). Corresponding to these are diverse representations and modes of appropriation which, in one way or another, require us to identify the different registers on the basis of which various actors' relationship with public policies and administrations (innovators, public officials, unionist representatives, users, etc.) is reconfigured.

There is an abundant English-language literature devoted to this field, emanating primarily from Scandinavian research centres and/or field studies, but which is cited relatively little by French authors. Drawing up a reasoned and exhaustive synthesis of this literature is a challenge that I cannot reasonably take on in this introduction. I would nevertheless like to present what I feel are some of the major recent results in this scholarly field. This partial review will enable me to link the contributions in this issue to some of the most established topics in this field of research, and to show the resonance between them.

THE DIGITALIZATION OF PUBLIC SERVICES

Full-speed digitalization

Research into the dynamics of digital instrumentation and the dematerialization of public action reveals, firstly, that this is a global phenomenon affecting all advanced capitalist societies and some countries in the Global South. However, it is developing at different speeds and according to different government plans[7], with very different areas of application, practical arrangements, implementation regimes and partnerships (Buhr, 2017). These depend on several factors, including *inter alia* infrastructure, legislative and regulatory frameworks, and socio-economic contexts. While Estonia, Malta and Iceland are 'good pupils', southern European countries have lower performance indicators, and others – Romania, Moldavia, Serbia, etc. – seem to be lagging well behind[8]. Studies on 'digital government' identify various phases of digitalization within nation states, the most recent of which are characterized by a change in the nature of the administrative relationship with citizens and businesses as a result of the growing importance of the massive processing of potentially sensitive private data and usage data (datafication[9]). Public institutions thus acquire new capacities for classification, categorization, automation,

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[7] Sara Hofmann and colleagues (2020) have developed an analytical framework for comparing government policies on the digital transformation of administrations.

[8] France's performance is slightly below the European average. For a full assessment, see https://digital-strategy.ec.europa.eu/en/library/digital-decade-2024-egovernment-benchmark (accessed on 15/01/2025); for a detailed global overview, see United Nations, 2022.

[9] Jørgensen, 2023; United Nations, 2022; Andreassen et al., 2021.

evaluation, surveillance, and so on, but also face new challenges in terms of the right to data protection (Larsson and Haldar, 2021; Alston, 2019).

The Scandinavian countries were pioneers among the first welfare states to digitalize their administrations. Buoyed by crisis-resilient economies, a high level of education, an enviably effective model of universal social welfare, strong confidence in institutions (van Kersbergen and Svendsen, 2022) and some of the highest levels of digital information and communication technology (DICT) equipment in the European Union, they rapidly dematerialized their public services[10]. The transition of their institutions to digital technology has also been facilitated by the importance that the governments and state agencies in these countries attach to the theories of human capital, self-service and self-care, which are supposed to empower citizens[11]. The Nordic social sciences have also consistently examined the evolution of social welfare models in light of the dematerialization of public administration services and the emergence of 'welfare technologies'[12]. They have invariably pointed out that the promises of a general improvement in the administrative relationship have not always been fulfilled, far from it.

To give just a few examples, Anne-Marie Tuikka (2020) investigated the social services sector for young Finnish people with disabilities, particularly those on the autism spectrum. She showed that the digital instrumentation of social services had sometimes made access to them even more difficult, and that it did little to ease parents' burden of caring for children or even contributed to their mental exhaustion. Similarly, Christian Østergaard Madsen and Pernille Kræmmergaard (2015) have shown, in the case of Danish single parents, that access to the benefits available to them has not always been improved by the digitalization of services. In another case, in Sweden, where migrants have access to a range of online services designed to facilitate their integration, these do not seem to meet their expectations since numerous problems of access and use are added to the complications inherent in migratory situations (Micinski and Jones, 2021). Other studies could be cited in addition to those mentioned here, including in other geographical areas. The theme of the evolution of welfare states in relation to their digital instrumentation has been addressed extensively in the literature (Busemeyer et al., 2022). The digitalization of social welfare and assistance systems is systematically presented, not as a simple change in organizational and management tools, but as a political development redefining the relationship between the state, social life, and citizens.

Digital by default

This research shows that one of the major obstacles inherent in the digital instrumentation of public services and in imposing the use of NICTs in the administrative relationship (Barassi, 2019) is that digitalization is attended by the partial or total closure of administrations' physical points of contact[13] ('digital-by-default' principle; Yates et al., 2020; Bracken, 2019). The

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[10] Denmark and Finland, for example, top the United Nations 'High EGDI group' (United Nations, 2022). (EGDI = E-Government Development Index)

[11] The increased involvement of users in registration, declaration, and other operations is sometimes described as a service co-production process intended to empower both agents and users (Nabatchi et al., 2017; Osborne et al., 2016).

[12] Jørgensen, 2024; Larsson and Teigland, 2020; Petersen and Schou, 2020; Bäckman, 2019; Kamp et al., 2019.

[13] The widespread digitalization of government administration has led to a search for alternative forms of access to public services, one example of which is the network of structures with the 'France services'

gradual or abrupt abolition of these in-person service desks, which are essential for assisting people whose path to accessing rights can be particularly arduous, effectively entrenches an unequal situation that renders null and void the principle of continuity and quality of public services (Okbani, 2022a). In France, the Défenseur des droits (2022; 2019) (an independent ombudsperson institution) has repeatedly emphasized the risk of a breach of equality for citizens due to the reduction in multi-channel accessibility. It therefore advocates maintaining a variety of ways of accessing public services[14], which it believes is the only solution capable of ensuring access for all, combating the decline in physical contact with the administration, and maintaining an efficient assistance relationship, particularly one that is capable of handling the most complex cases. Various civil society players are likewise calling for a 'right to the physical service desk' (Tchen, 2013; Dubois, 2010).

Many studies have highlighted this need, particularly those on policies regarding migrants, for whom certain administrative procedures (applying for residence permits, minimum social benefits, naturalization, etc.) are already tricky under 'normal' conditions (Alasseur, 2023; Faron, 2019 and 2016). These individuals are made to feel even more uncomfortable when they have to use dedicated digital platforms, which many of them are still unfamiliar with and find inconvenient. Migrants are certainly 'connected' (Diminescu, 2005), but they are rarely connected in a way that makes it easy for them to adjust to the online administrative relationship. The major obstacles lie first and foremost in the difficulties they encounter with the French language and, more particularly, the language of administration – a bureaucratic jargon, the 'subtleties' of which (acronyms, procedural jargon, instructions, etc.) even native speakers sometimes find hard to understand. Migrants, especially new arrivals, may not be speakers, readers or writers[15] and, when they are, their language proficiency may be limited, preventing them from meeting the requirements associated with a calculating, strategic and autonomous individual. In addition to this aspect of language proficiency, they may have difficulty understanding the administrative procedures themselves, which are complex and sometimes change. Knowledge of state institutions, their unique rationale and the way they operate is obviously not self-evident for individuals who have not previously been informed about and socialized into the welfare state. The widespread use of online procedures is not of any help in reducing forms of social distance and cultural disjunction with regard to administrations (Granjon and Craheix-Gadhgadhi, forthcoming). Without outside help, the whole process of accessing rights (application, information, follow-up) becomes difficult, if not impossible, exposing migrants to the risk of increased insecurity as they are unable to obtain the state benefits for which they are eligible and which are essential to their social integration.

A new administrative burden

This is a far cry from the figure postulated by public policy, of an *autonomous* user actively working to integrate into the 'digital society', capable of coping with an administrative relationship 'without a relationship' (Dujarier, 2017: a 'vacuum of personified relationships') and demonstrating ingenuity and a sense of responsibility for themselves (Triantafillou, 2017).

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label. This is being implemented locally and regionally, with the aim of bringing public services closer to users by implementing 'soft forms of government' (Cottin-Marx, 2019).

[14] There is now a body of research on the question of the choice of channel according to the objectives of the interaction envisaged with administrations: cf. Østergaard Madsen and Kræmmergaard, 2018; Ebbers et al., 2016; Anthopoulos and Reddick, 2014.

[15] This type of deficit is not limited to migrants (Galván Castaño, 2022).

Most of the work done on the theme of the 'administrative burden'[16] associated with the digital instrumentation of public services emphasizes that welfare states are drawing their inspiration from new commercial practices (in the manner of the *work of the consumer*: Dujarier, 2014), inviting citizens to engage in actions that are supposed to be the prerogative of public agents but which ultimately fall to them. The dematerialization of public action thus signals a dual delegation: certain operations are delegated to technical devices; and additionally there is a shift of responsibility towards users, who now bear the burden and responsibility for the smooth running of the processes they are involved in. Mathilde Boeglin-Henky's article in this issue sheds light, for example, on the way in which the unemployed are 'put to work' as the activation policies of Pôle emploi (now France Travail) are intensified: 'There is no interaction to qualify the situation of the unemployed when they register with Pôle emploi. It's up to them to fill in their family and social situation, assess themselves and identify the criteria for finding a job'. As a result, an initial sorting process takes place, which tends to favour jobseekers who seem most able to manage on their own, particularly when it comes to handling digital tools (in the same way that the medical profession assesses *the social loss* that the disappearance of certain patients would represent: Glaser and Strauss, 1964). The assumed or observed technical agility thus becomes a relevant category for employment advisers to classify individuals and rank the forms of assistance to be provided to them. Dematerialization is reshaping the social division of labour between staff and beneficiaries, and generating negotiation processes around the division of tasks. Employment advisers 'do', 'get done' or 'let do' the unemployed, based on their own assessments, their workload, and the level of autonomy that the unemployed individuals actually show faced with the injunction to take responsibility for themselves 'with a view to better "social inclusion"' – an objective whose potential success seems to be assessed primarily according to the jobseeker's level of digital inclusion. However, for many individuals the digitalization of administrative procedures, introduced for the purposes of accountability, self-care and self-service (mandatory digital self-service: Eriksson and Vogt, 2013), and presented as a gain in terms of access to services and speed in the processing of applications, is in fact proving to be an additional obstacle to overcome, likely to fuel a phenomenon of *non-take-up of rights* (Frey and Hyee, 2024).

Non-take-up

The issue of non-take-up, which has received relatively little attention in the Anglo-Saxon literature despite the scale of the phenomenon at European scale, has been widely addressed in France[17]. The teams at ODENORE (Observatoire des Non-Recours aux Droits et Services, the observatory for non-take-up of rights and services) have produced a body of work showing that the introduction of connected computing into administrative relations has made access to and mastery of digital tools a new eligibility criterion for rights, which can lead to non-take-up[18]. In this respect, Hélèna Revil and Philippe Warin (2019) argue that the digital resources deployed do not make it possible to listen to individuals who either fail to take up their rights or who resist doing so, or for institutions to justify the refusals they issue. Their research shows that the more 'target audiences' experience difficulties with social integration, based on cumulative capital deficits (economic, cultural, social, etc.), the more the transition to digital tends to constitute an additional burden for the most vulnerable. It reinforces the factors of

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[16] The 'administrative burden' reveals 'learning, psychological and compliance costs to which citizens are subjected in their interactions with the state' (Herd and Moynihan, 2018 :22; Østergaard Madsen et al., 2022; Christensen et al., 2020).

[17] 17. Deville, 2023; Alauzen, 2021; Warin, 2019; Défenseur des droits, 2017.

[18] 18. Rode, 2024; Helsper, 2021; Mazet, 2019, 2017a and 2017b; Mazet and Revil, 2018.

exclusion that previously affected them and shifts the responsibility for non-take-up of rights onto them.[19]

On the other hand, the digitalization of public services means that those with the best resources and a command of ICTs can quickly access useful information and become more independent in dealing with administrative procedures. Clearly, by virtue of their education, those with a high level of academic qualifications are in a better position to grasp the importance of certain procedures and, for the same reasons, benefit from information skills (searching for information, skills in classifying, sorting, interacting, etc.) and certain dispositions (desire to do well, self-confidence, etc.). It has been shown that in most cases this functions as a system and opens up greater potential in their use of digital technology (Zillien and Hargittai, 2009). By contrast, individuals who are culturally less well-endowed and have incapacitating dispositions (fear of doing things wrong, of being fooled or watched, etc.) are also those who have the most difficulty mastering the practices involved in the digital instrumentation of the administrative relationship (Hofmann et al., 2024). The 'administrative burden' inherent in digital technology thus becomes an impediment to the access to social benefits for the users of public administrations who are most in difficulty, that is, those who are most in need of subsistence social benefits (Larsson, 2021). This phenomenon is seen by some as contributing to a 'radical creaming off of the poor' (Warin, 2021).

RECONFIGURATION OF THE ADMINISTRATIVE RELATIONSHIP

Hanne Höglund Rydén has shown, for example, that in Norway the welfare state expects citizens to manage their own affairs in an environment where decision-making has become highly standardized (Höglund Rydén and Alonso de Andrade, 2023). Yet in many cases 'digital simplification' ends up actually being a complication.[20] This imposes significant transaction costs[21] on users of public services, particularly in the case of means-tested services, making it even more difficult for them to access their fundamental rights. When individuals are faced with genuinely difficult life situations, the standardized forms of interacting with administrations that digital technology imposes usually become an additional ordeal for them, since the requirements are generally hardly suited to their skills and dispositions (Østergaard Madsen and Lindgren et al., 2022). Anne-Sylvie Pharabod and Céline Borelle's article in this issue precisely identifies the repertoire of 'families of actions' that cause problems and create 'zone[s] of ordinary instability' for a large part of the population: 'Access [to [user] accounts, management of their personal information, circulation and storage of their documents, mobilization of exchange channels, actual performance of the main operations (submission of a request, payment, signature, etc.) and management of timeframes'.

These authors point out that acculturation to digital procedures implies an ongoing process of reformatting individuals' administrative paths, reconfiguring routines and encouraging new habits: 'The new "contract" with services, consisting in internet users adjusting their ways of carrying out procedures, to align with the development of digital administrative systems, is perceived ambivalently, both as something to become accustomed to, and as a never-ending

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[19] Gleizes et al, 2022; Okbani et al, 2022; Ranchordás and Scarcella, 2021; Schou and Pors, 2019; Defenders of Rights, 2017.

[20] Management standards that change, forms to fill in that vary, rigid regulations and eligibility tests, etc.

[21] Equipment, learning, compliance, psychological, and other costs.

process [....]: changes in ways of storing, signing and paying, the emergence of intermediaries to authenticate and manage passwords'. This need for adaptation involves getting used to the system, transferring skills (particularly professional skills) and deploying mutual support practices that go beyond technical and administrative know-how. It also involves managing negative emotions (demotivation, impatience, anxiety, mistrust, etc.) and the trials and tribulations that accompany failures and expectations linked to the uncertainty of having done the right thing or not.[22]

Getting help

To overcome the difficulties encountered, the support provided by third parties who are variously 'close' (friends, family, neighbours) appears to be the most common 'solution'[23] (Herd and Moynihan, 2018; Boeglin-Henky, in this issue). However, it usually solves the problems only temporarily: 'Rather than the figure of the expert in whom all the knowledge is concentrated, we see a continuum of know-how of varying relevance and scope, unevenly distributed [...]. Many carers are themselves part of mutual aid chains that place them in the position of being helped with certain tasks' (Pharabod and Borelle, in this issue). Users in difficulty also sometimes turn to professionals from the voluntary sector or social work. They need occasional help to register for services or to follow up a file, obtain training, rectify an unintentional declaration error, be reassured[24], and so on.[25] Even though these professionals are supposed to be better equipped to deal with administrative issues, they may still be destabilized by the need for digital assistance, which shifts the scope of their primary tasks[26]: too much time spent on technical manipulations; devaluation of the 'core trade' by the new dematerialized methods; limited scope for action (Bickel and Vatron-Steiner, 2023); and so on. Pierre Mazet and François Sorin (2020) emphasize that these situations generate 'disruptions in profession skills and identities' based on an increasingly prevalent tension between the duty to provide assistance and the ability to do so under the conditions of dematerialization, which in particular calls into question certain ethical principles[27] (the fact of acting on behalf of individuals, having access to their personal data, their identifiers, etc.: Ryboloviecz and Gascoin, 2021).

Among these support individuals, 'third-party access facilitators', *digital mediators* are also increasingly called upon to deal with requests for administrative assistance, which, although 'ordinary', nonetheless cover an increasingly wide range of sectors (Borelle et al., 2022b).

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[22] Uncertainty that can also be found among medial users, that is, professionals who have to deal with digital devices that they do not always know for sure how to use 'correctly' (Tiberghien and Kuehni in this issue).

[23] 'French people in difficulty tend to seek help from those close to them: 26% seek help from their friends and family if they have digital difficulties, and 28% believe that turning to their circle of friends and family is the best way to improve their digital skills' (Crédoc, 2024: 17).

[24] The feeling of not having mastered digital technology concerns a quarter of the total population (25%; +7 points compared to 2020; ibid.). The lower the level of academic qualification, the greater the concern about having to complete most of one's administrative formalities online, as the skills and attitudes to domestic writing are partly acquired at school (Alberola et al., 2017).

[25] Rode, 2024; Borelle et al., 2022a; Baumberg, 2016.

[26] Rode, 2024; Boeglin-Henky, 2022; Okbani, 2020a and 2020b.

[27] For an international synthesis of the repercussions of the dematerialization of social work on the professional practices of its agents, see Jacob and Souissi, 2022.

While they feel experienced in the use of digital technology, they do not always feel competent when it comes to administrative matters, which are difficult to cover in their entirety. Tasked with helping to develop people's digital skills, they find themselves increasingly responsible for providing specific support to administration users, to enable them to meet the new demands of public services (Défenseur des droits, 2019). Digital tools have led to a proliferation of requests for assistance, particularly in rural areas[28]. While frontline administrative staff are often called upon to act urgently and on behalf of the public where in-person interactions are still possible[29], specialized staff are also emerging to mediate the dematerialized relations of certain administrations (e.g. the so-called 'blue jackets' civic services at Pôle emploi; Besch, 2022). Special missions and statuses are also emerging, such as the France Services agents (Leroux et al., 2023) or the France Services digital advisors (CNFS; Mazet, 2023) – new professional activities stemming from the 'digital inclusion' and 'fight against *illectronisme*' (i.e. digital illiteracy) programmes.

The digital instrumentation of public services therefore raises once again – more than in a new way[30] – the social issue of the digital divide (Granjon, 2022). The related programmes are becoming an area of social policy in their own right, insofar as the digitalization of the state's capacity for action places the use of ICTs within a repertoire of practices marked by inequalities that must themselves be addressed. Pierre Mazet's article in this issue deals specifically with one of the public programmes aimed at implementing this 'inclusive digital' approach. Based on a longitudinal study of the various stages in the interessement, recruitment, training and deployment of France Services digital advisers (CnFS - *Conseillers numériques France Services*), it sheds light on the various reasons why the scheme has proved to be fragile. It benefits first and foremost those structures that were previously most committed to digital inclusion and best endowed with the resources needed to develop the digital mediation sector (budgets, HR, political support, etc.). In this instance, it appears that the state has relied on the European recovery plan to transfer to local players responsibility for a public problem for which they must assume responsibility in the absence of any regulatory or institutional competence. Resources are proving to be 'structurally insufficient to stabilize a proportionate response to needs', which are all too rarely identified with particular types of public. Some structures refuse to deal with requests for administrative assistance linked to dematerialization, while others specialize, compelled by the number of requests to revise the initial orientations of their mediation system. On a national scale, online procedures are the main form of assistance provided by the CnFSs, which shows that the need for support is effectively indexed to the digitalization of administrations. This is, to say the least, a 'paradoxical situation of a public policy – digital inclusion programmes – that is unable to meet the needs generated by another public policy – dematerialization' (Pierre Mazet, in this issue). Digital instrumentation is causing some citizens to move further away from government, and this is seen as something

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[28] Volpe and Zaza, 2024; Deville, 2023; Devez, 2022.

[29] They thus act as 'digital helpers'. On its website, the Agence Nationale de la Cohésion des Territoires (national agency for territorial cohesion) indicates: 'By digital helpers, we mean professionals who are on the frontline in dealing with users who are having difficulty with digital technology, even though supporting the public in their digital uses is not always at the heart of their missions. [...] Training and equipping digital helpers is a major part of the national strategy for digital inclusion' (https://agence-cohesion-territoires.gouv.fr/former-et-outiller-les-aidants-numeriques-583 [accessed on 15/01/2025]). Similar programmes exist in most European countries. On this subject, see Tiggelaar and George, 2023; Pors, 2015.

[30] Some consider these to be 'new social risks' (Didem, 2023).

that needs to be compensated for by public action aimed at re-establishing new local policies based on 'local governance'[31].

Street-level / screen-level bureaucracies

Ulrich Jan Schröder (2019) describes this global change in relations with citizens as a being in the wake of new public management and the theory of public values[32]. He argues that governance by digital devices has facilitated the advent of a neoliberal administration prioritizing market values (Schou and Hjelholt, 2018). Government has thus strengthened its control over the population (Ranchordás and Scarcella, 2021) but, paradoxically, has lost control over its main instruments, particularly those used to help make decisions about granting rights and allowances. It has increasingly entrusted these decisions to opaque algorithmic procedures in relation to which grassroots agents have little room to manoeuvre, and to which they are compelled to delegate a substantial part of their discretionary powers. Government employees responsible for interacting directly with the public have thus seen some of their prerogatives withdrawn. While these prerogatives may certainly have given rise to the well-known excesses of 'local bureaucracy' (Lipsky, 2010: personal moods, prejudices, errors, corruption[33], etc.), they did allow them some latitude enabling them to make adjustments as close as possible to the variety of individual situations encountered. By contrast, the digital instrumentation of procedures tends to lead to delegation to the digital device. This typically turns public service workers into executors subject to action programmes containing rigid organizational norms underpinned by a largely inflexible technical rationality[34].

While it is sometimes possible to divert certain *scripts* (by bending prescriptive logics, reducing the effects of constraint, limiting/transforming the scope of instruments – digital discretion), the interpretative margin of public servants and their 'moral agency' are, de facto, considerably reduced (Zacka, 2017). Their discretionary practices may thus relate solely to assessing the level of service to be adopted in relation to users. In this case, their role is less that of expert adviser than of 'case manager' or 'generalist coach', whose job it is to remind citizens of the need for them to become 'digital citizens' and to encourage them 'to do more'[35]. For example, in this issue Mathilde Boeglin-Henky points out that, whereas advisers at the public operator Pôle emploi used to act as intermediaries between job supply and demand, they are now expected primarily to help the unemployed to master IT tools, because it is 'less a question of finding the unemployed a job than of making them "autonomous" with digital tools'. This re-definition of functions is leading to a review of the assistance relationship, on the part of both staff and users. The latter are also adjusting their behaviour and using the new administrative contract to give themselves room to manoeuvre in relation to the institutional norm (e.g. by avoiding in-person interaction) or seeking to benefit from assistance they could do without and,

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[31] During the debates on the 2025 Finance Bill, several associations of local councillors denounced the major budget cuts undermining the 'France Numérique Ensemble' programme for the territorialization of digital inclusion policies, as the continued existence of France Services digital advisors within local authorities.

[32] Busch and Henriksen, 2018; Bannister and Connolly, 2014; Moore, 1995.

[33] On digital instrumentation as a tool for combating corruption in administrations, see Santiso, 2019; Elbahnasawy, 2014; Andersen, 2009.

[34] Note that, for Lipsky, 'the nature of service provision involves human judgement [...] for which machines cannot substitute' (2010, p. 161).

[35] Kersing et al, 2022; Pors, 2015; Margetts and Dunleavy, 2013.

in so doing, redelegating to agents some of the responsibilities that had been reassigned to them.

The medial user (street-level bureaucracy agent: Lipsky, 2010) and the final user (citizen) thus find themselves the object of a form of reification through a programmed reduction in their respective individualities. The public official tends to become a screen-level bureaucrat (Bovens and Zouridis, 2002), a mere executor who manipulates data, while the citizen is transformed into a 'typical' user who relates to one or more administrative categories of which they are only a unit. In practice, however, this division is never so clear-cut[36]. Jorge Muñoz (2015) shows, for example, that in France the digitalization of the services responsible for managing occupational accident declarations is causing the agents in these services to develop a sense of loss of control, skills and meaning, due to the reconfiguration of their categorization-related activities. However, this disappointing reality linked to the imposed reorganization of their professional activity is counterbalanced by a 'creative' dynamic enabling them to regain control over some of the practices at the heart of their profession, based on new ways of doing things. In this instance, the reclaiming of activity is based on increased collaboration between staff (particularly via online systems: Couillet, 2023) and the ability to produce new associations between the functioning of digital systems and the functioning of the resulting professional collective. Other studies show that, in the face of changes imposed from above, innovative strategies for circumventing and adapting to socio-technical constraints are simultaneously being developed, along with logics of 'responsible autonomy' based on professional ethics, which are sometimes revived.[37]

Agents in tension

Several studies have however pointed out changes in processes and functional roles that are tending towards a twofold depersonalization of support: one the one hand, a reconfiguration of professional identities and cultures[38] (loss of autonomy and discretionary power[39]); on the other, decisions framed by digital instrumentation that do not necessarily respond adequately to the needs of people using public services. Eric Breit and colleagues (2021) have shown, for example, that 'frontline workers' in Norwegian employment services are faced with new tensions and dilemmas (transparency, traceability, loss of control over the information produced, increased demands, etc.) that undermine their established professions – and even their functions and positions[40]. This causes stress and tends to make them feel closer to their users than they did before – embarked as they are in the same 'digital nightmare' (Tummers and Rocco, 2015). At other times, however, it leads them to be more selective and to prioritize support for those who supposedly have the best prognosis for returning to work, or those who are best able to express their needs on digital platforms.

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[36] There are constraining effects, but also enabling ones (Buffat, 2015; Jorna and Wagenaar, 2007; Gordon et al., 2024).

[37] Dupret and Friborg, 2018; Klemsdal et al., 2017; Tiberghien and Kuehni, in this issue.

[38] Susan Halford and colleagues (2010) have shown, for example, how the arrival of electronic patient records in a Norwegian hospital led not only to a new division of tasks and responsibilities, but also to a disruption of the professional identities of carers, as well as to the restructuring of interprofessional collaboration in the hospital.

[39] Dubois, 2021; Wihlborg et al., 2016; Parton, 2009.

[40] Pasi and Misuraca, 2020; Lindgren et al., 2019; Wihlborg et al., 2016.

The coping mechanisms implemented by 'frontline workers' oscillate between different modalities which vary according to the situation, the individual, and their workload, and which are not affected by the same feeling (positive or negative) in the moment: increased availability of attention, renewed professionalism, caution in drafting texts, outsourcing of certain actions to users (self-help), new prioritization of tasks, limiting interactions, bypassing procedures, and so on. A new repertoire of professional action is emerging. Public servants consider it to be more demanding insofar as it is based on a challenging of the asymmetries characteristic of traditional relations between managers, employees and users, which exposes employees more to the control of the hierarchy, peers and the public. Julie Tiberghien and Morgane Kuehni's contribution to this issue provides a very convincing example of how a software package can change professional practices and experiences, in this case within the social services of a canton in French-speaking Switzerland. While the digital system introduced can be seen as a concrete response to the functional needs of good management of public welfare, it is also presented as the root of new standardized practical obligations, control procedures based on statistics of staff activity, and tests of professionalism that undermine professional identities. This new form of conventional government is becoming a lasting source of concern, not least because it allows social workers' activities to be traced and monitored more widely, without them having the means to find out exactly how this is done and to what extent. This widespread surveillance, made possible on a constant basis, introduces a sense of unease among staff (the feeling that they can be caught out) and undermines their practices. They are forced to develop an unprecedented level of justification and protection 'with the aim of protecting themselves both individually, that is, their person, and collectively, that is, their profession'.

Citizens under control

Some studies[41] stress the fact that computerized routines undermine 'pre-digital' professional skills, particularly civil servants' decision-making power, and sometimes reduce the quality of service (van Lancker and van Hoyweghen, 2021). On the other hand, it is also argued that they may strengthen the ethical, practical and democratic values of public services[42] by reducing the gap between 'policy as written' and 'policy as implemented' (Lipsky, 2010). Other research has focused on results that highlight the opposite effects: digital instrumentation leading to greater control of individuals and a tightening of the allocation of benefits, making it possible to build policies of discrimination, suspicion (or even criminalization[43]) into the algorithmic systems – particularly on the pretext of combating fraud. This is largely to the disadvantage of the most precarious users and restricts their de facto access to social services[44]. Virginia Eubanks (2018) argues that digitalization not only hampers the discretionary power of public officials, but also constitutes a general mechanism through which a much more repressive form

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[41] Busch and Henriksen, 2018; Houston, 2015; Paulin, 2013; Wenger and Wilkins, 2009.

[42] Control of agents, transparency of procedures, access to a large quantity of resources via interoperability, speed of processing, improvement in the quality of decisions, etc. (Buffat, 2015).

[43] Patrick Williams (2018), for example, analyses the way in which the digitalization of police services in the United Kingdom and, more broadly, in Europe (biometrics, online content extraction, telephone location data, predictive analyses, etc.) is contributing to the increased criminalization of racialized people and their 'over-conviction'.

[44] Vivès et al, 2023; Dubois, 2021; Bekker, 2021; Braithwaite, 2020; Benjamin, 2019.

of government is imposed, leading to massive over-control of the most precarious members of the population.[45]

Digital technology and social control

In France, the CNAF, which is the national family support fund (Caisse Nationale d'Allocations Familiales), as well as the national health insurance fund (Caisse Nationale d'Assurance Maladie) and the national retirement pension fund (Caisse Nationale d'Assurance Vieillesse) rely on an algorithm for rating benefit recipients in order to identify individuals who should be subject to checks: 'In December 2023, *La quadrature du net* published the source code of this algorithm. This publication provides definitive proof of the discriminatory nature of the criteria used by the CNAF to estimate the 'degree of trust' that the institution places in each individual. Among the variables that increase the 'suspicion score' are: having a low income, being unemployed, spending a large part of your income on rent, not having a job or a stable income, and being a single mother. A detailed analysis of the algorithm's code highlighted the major role played by criteria linked to insecurity in the calculation of the 'suspicion score'. All other things being equal, the probability of a couple with a comfortable income and a stable employment situation being checked is almost zero, whereas it is very high for those receiving minimum social benefits, people with disabilities or single mothers' (*La quadrature du net*, 2024; https://changerdecap.net/2022/04/04/caf-temoignages-changer-de-cap/ [accessed on 15/01/2025]).

The French case is by no means unique. Identical problems have been signalled in other countries, including the Netherlands, the UK, Australia, the USA and China. The number of underpayments, denial of benefits, undue demands, exclusions, arbitrary decisions, and so on has literally exploded in some countries.

The digitalization of government services has unquestionably led to an increase in the circulation of data and the creation of platforms for linking up the databases of different services, with the ultimate aim of unifying areas of intervention within the same network (e.g. police and justice), or even between public institutions. Yet, while interoperability may lead to gains in efficiency, the *datafication* of public action and the resulting capture of social data do raise questions about the model of public service – and more generally of society – that this could ultimately produce. *'Surveillance'* capitalism seems to have penetrated the state sphere (Jørgensen, 2023; Zuboff, 2020). The private tech sector is becoming a model to follow in terms of its demands for performance, profitability, managerial rationality and disruptive innovation. In France, the idea of a platform state and a start-up nation (in the form of a state start-up) augurs an unprecedented form of privatization of public service missions[46] (Jeannot

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[45] From an intersectional critical perspective, some research evokes the idea of a 'techno-colonialism' or 'data colonialism' (Mejias and Couldry, 2024) imposed by extractivist institutions (cf. https://calculatingempires.net/about. html [accessed on 15/01/2025]) that exploit the information supplied by individuals. This is spawning a new regime of public analyses characterized by refined profiling, and scoring and predictive analyses (Yeung and Lodge, 2018; see also the work of the Data Justice Lab at Cardiff University's Journalism, Media and Culture centre: https:// datajusticelab.org [accessed on 15/01/2025]).

[46] A note by the Conseil d'Analyse Économique (a body reporting to the Prime Minister) states that personal data protection is considered an 'impediment' and that it is necessary to develop 'product

and Cottin-Marx, 2022). This trend has also been noted in other European countries, such as Denmark, where the digitalization of the public sector has led to the transfer of responsibility for key infrastructures to private players and, more broadly, has transformed the political economy of the state (Collington, 2022). The Scandinavian welfare states have thus come to position themselves as key players in a Big Data economy based on the commercial exploitation of massive amounts of data collected as part of their public action, presented as a new opportunity for value creation (Reutter and Åm, 2024).

ADMINISTRATION AND INNOVATION

Given the relative lag of digital innovation in Europe – at least by comparison with the United States and China – some believe that the Old Continent's lack of dynamism could be compensated for by making its member states prime areas for the development of 'applied digitalization' capable of stimulating economic growth in the EU. While this strategy does not appear to be clearly implemented at present, the digital instrumentation of public policy is evidently fostering new partnerships with the private sector. These are leading to a redefinition of inter-institutional dialogue and are also accompanied by the emergence of government agencies and programmes[47] with a variety of interests, some of which compete with one another in their drive to reform the production of public policies.

Innovate, enrol, translate

In this issue, Pauline Boyer documents the implementation, in 2014, of the Ministry of Higher Education and Research's open data platform, the first ministerial open data portal. The case is interesting in that it highlights the central role played by the French start-up Opendatasoft in the transition to a technical solution to which access will no longer be restricted. In this case, the open data platform is not the technical translation of a political demand to open up administrative data, but the result of a bottom-up *translation* process (Callon and Latour, 2006). It benefits from an institutional and political context favourable to digital transformation initiatives, through which the project becomes the driver of the various players' interests. Above all, the platform provides a timely response to a range of problems (particularly technical maintenance) that open data is not usually supposed to address[48] but which, presented in the best interests of each stakeholder, have turned them into allies. It is therefore a strategic 'mix' mobilizing several types of expertise (technical, bureaucratic, political) which, skilfully addressed to various decision-makers – some of whom will become spokespersons for the innovation project –, ultimately facilitate the adoption of the digital system.

By contrast, in the case of the electronic patient record (DMP – *dossier medical partagé*), which Nicolas Klein and Alexandre Mathieu-Fritz discuss in this issue, this change came up against numerous obstacles that made it difficult to align the heterogeneous requirements of the various

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innovation' and to realize that 'the redefinition of the field of administrative services stems from the digital economy's ability to take advantage of the platform structure' (Algan et al., 2016).

[47] Examples from France include: Etalab, the inter-ministerial digital directorate, general-interest entrepreneurs, etc.

[48] The 'open data' movement calls for private and public databases to be made available so that services can be produced to improve people's quality of life. Open data is therefore supposed to enable innovation in new services, widen the circle of data sharing, encourage citizen participation in political and social life, and work towards greater state 'transparency' (Paskaleva and Cooper, 2018).

actors involved: technical problems (interoperability, ergonomics, etc.); political expectations; power struggles between ministries; reluctance and disagreements of/between healthcare professionals; the hopes of patient organizations; and growing industrial interests. These misalignments have led to compromises which, ultimately, hardly satisfy all the protagonists. They have made the DMP an 'object' which both medial users (healthcare professionals) and end users (patients) are still finding it difficult to grasp, despite its integration into the 'Mon espace santé' ('my health space') system[49]. While research on electronic health records (Häyrinen et al, 2008) tends to show that the use of a health information system facilitates the creation of more complete and accurate personal records, it also emphasizes that this practical advantage does nothing to ensure users' and healthcare professionals' appropriation of the system. This is sometimes the case despite in-depth reflection on the practical aims of the innovation, as in the case of the DMP or electronic health records (EHRs) in the United States (Pew Charitable Trusts, 2021).

The two-decade history of the digital patient record also reveals the consequences of its inclusion in the governance of the projects of certain healthcare IT industry players, to whom questions relating to the technical feasibility of the system were delegated. This choice has led to controversial decisions regarding the awarding of contracts, and above all to the abandonment of in-depth consideration of the public use value of the DMP, in favour of the interests of professional software publishers. The digital instrumentation of public action is leading to new public/private collaborative schemes (Bellon, 2021) with industrial operators and suppliers of technical solutions[50]. These schemes are not problem-free (Gil-Garcia et al., 2019), particularly when it comes to the choice and *design* of instruments, or the place to be reserved for users in the innovation stage. The medial user and the end user are not very present or represented in the design process during either the *negotiation* stage between senior civil servants – who are responsible for an administrative project – and private operators – who are subcontractors, service providers, and suppliers of technical solutions, where the state is usually responsible only for project management –, or the *incrementation* stage, which consists in putting the objectives defined upstream into technologies and *scripts*. Paradoxically, therefore, innovators do seem to be called upon to offer online services tailored to the actual needs of citizens[51], but they do not seem to be very vigilant when it comes to the difficulties that certain fringes of the population may encounter in accessing these new services[52] (Hall et al., 2015).

The place of users

The work of the sociologist Périne Brotcorne (2023) documents this aspect specifically. In her article in this issue, she highlights the glaring absence of users during the design and implementation stages of a digital administrative service point in the Brussels-Capital region

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[49] http://www.monespacesante.fr (accessed on 15/01/2025).

[50] These 'partners' or similar organizations may also be behind the development of private services in direct competition with equivalent services developed by the public administration (e.g. Wiizbi.com: 'Services useful to 16-30-year olds'; Mes-Allocs.fr: 'Financial aid expert'; Rendezvousprefecture.com: administrative appointment booking; Leboncoin.fr: job vacancy provider – including in the public sector, etc.).

[51] Users as everybody: Oudshoorn, et al. (2004).

[52] For example, migrants, people with disabilities, the elderly, protected adults, prisoners, people receiving minimum social benefits, etc. (Défenseur des droits, 2019; Wihlborg et al., 2017; Fisher et al., 2015).

(IRISBOX), showing how this removes them from the possibility of deliberating on the values encoded in these new infrastructures. The situation appears all the more paradoxical insofar as the various actors involved in the innovation process are claiming to provide a 'user approach' in line with an 'average' or 'ordinary' user (agent or citizen). In the final analysis, this approach reveals a very basic perception of the public for whom the service is intended, stemming from the designers' intuitions and representations from their own personal experiences or those of people close to them. It is therefore not surprising to find a mismatch with the expectations and capabilities of users and staff: 'In all cases, the user trapped in the design of the service point is neither weak nor a non-user of digital technologies. There is moreover no secure digital input on the interface so that users can delegate their administrative tasks to a third party.' Despite the desire to implement an inclusion process 'by design' and to hold regular 'user clubs'[53] designed to ensure that practical difficulties are reported, it appears that the service implemented remains far too complex. It contributes to the 'production of disability' for some of those least accustomed to using ICTs, who also tend to become non-users of public services.

That which is presented in the literature as reflecting a logic of *co-production* or *co-creation*[54] of public goods and services[55], actually resembles a virtuality that materializes in a truly collaborative manner only in rare cases. The beneficiaries of public action are generally represented, at best, by a few individuals whose views and feedback from tests or experience do indeed complement and adjust the – not always well-informed – representations of the innovators, but without modifying their overall content. Clearly, innovation in the digital instrumentation of public action hardly applies the theories of co-creation that recommend considering users as holders of assets and knowledge of real value when it comes to shaping service innovations (Bassi et al., 2019). The contribution in this issue by Samuel Goëta and Élise Ho-Pun-Cheung provides precise information on the way in which a data standard defining the fields and values of digital mediation venues in France was developed. Agreeing on a standard presupposes producing categories that make sense to everyone, and to do this we need to take into account the experience of local actors, data producers, and data users.

Hence, to be effective the *negotiation* and *incrementation* phases must be processes of consultation and co-construction that are stabilized by normalization compromises. In this case, the ideally 'egalitarian' representation of the various stakeholders came up against a number of problems: the increased presence of certain actors with little involvement in the field of digital mediation; a feeling of illegitimacy for other actors in terms of their technical skills; and a lack of awareness by many of the individuals concerned, of the issues and impacts linked to the production of the standard. In addition to these obstacles to interessement and participation, it is the compromise-building operations that are also difficult, insofar as they are supposed to

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[53] Organized by private players, co-creation in public services needs to be rethought in order to be properly adapted to users. As Stephen P. Osborne (2018) points out, reluctant or coerced users/clients are, for example, largely unknown in the for-profit sector, but are commonplace in public services. Similarly, private companies often have a well-defined customer base, whereas public services have multiple beneficiaries, who may have differing and contradictory definitions of the results expected from a service.

[54] Loeffer and Bovaird, 2021; Osborne, 2018; Osborne et al., 2016.

[55] Some countries, such as Sweden and England, have legislative and regulatory frameworks that require certain public sectors (e.g. healthcare) to co-create their services (Bassi et al., 2024). On this subject, see the various documents accompanying the CoSIE project: Co-creation of Service Innovation in Europe, https://cosie.turkuamk.fi/arkisto/index.html (accessed on 15/01/2025).

highlight and neutralize divergent views and standpoints (Osborne, 2018). These operations prove to be much more radical than debating the technical means of *scripting*, since they concern, for example, the very nature of the activities to be categorized and the definition of the relevant elements to be taken into account. The political nature of these choices quickly becomes apparent, and they become a central issue in defining what digital mediation is or should be, and what skills these staff and places have or should have.

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