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Gianluca Sgueo

The paradox of «Low-Fi» digital public services

THE PARADOX OF «LOW-FI» DIGITAL PUBLIC SERVICES

Electronics for general use – also known as «consumer tech» – are designed to provide instant-gratification to their users, primarily via four design features: hyper-velocity (epitomised by shortened delivery time), over-simplicity (embodied by simplified user-interfaces, accessible to anyone, regardless of their level of expertise), singularity (exemplified by digital services and products tailored to users' needs and expectations) and (occasional) free-of-charge access to digital services. Consumer tech's instant-gratification, however, comes at a cost: a lower average quality of its products and services when compared to their analogical – or professional – counterparts. As consumers, we may accept standardised low-fi technology, and adapt to the trade-off between rapid gratification and lower quality. This compromise, however, becomes unacceptable when we step into the shoes of citizens interacting with public administrations via online platforms or other digital means. Hence, the paradox of low-fi digital public services. Democratic decision-making is antithetical to consumer technology on four grounds. First and foremost, digital democratic spaces must necessarily stay inclusive. Consumer tech instead can be – and often is – exclusive. Second, public regulation is designed for durability, while consumer tech plans its obsolescence. Third, norms and rules are directed to large and undifferentiated communities (with rare exceptions of ad-hoc approaches). Fourth, digital public services differ from consumer tech in terms of reliability. Consumers may always opt out and adopt cheaper alternatives – citizens can't. Higher complexity, extended duration and lower accessibility are passively accepted by many of us as regards the analogic, offline, public services. However, our acceptance quickly turns into frustration when we relate to, and engage with, digital public services. We expect our digital institutions to be easy to interact with, capable of responding both immediately and effectively to our demands, and possibly in a personalised fashion. In this article I propose to re-conceptualize the aesthetics of digitalised public services. I suggest downplaying the idea that digital decision-making can only be effective when it delivers rapid and successful responses to the issues of the day, regardless of its complexity. I propose three actions to sustain highly performing digital government: first, elaborate a storytelling approach to digital government that shifts the focus from immediacy to complexity; second, frame digital public spaces with a focus on the interactions, not the outcomes; third, and finally, encourage civic engagement through creative approaches (through game-design elements, for instance).

KEYWORDS *Design, Digital, Government, Performance, Public Sector.*

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1. The paradox of low-fi digital public services

This article is divided in three parts. The first focuses on comparing the design of consumer technology with digital public services. To this end, four criteria are considered: hyper-velocity, over-simplification, singularity and gratuity.

Drawing on a number of fundamental design differences existing between consumer technology and digital public services, the second part of the article focuses on digital interactions between citizens and public administrations. It suggests that designing digital public services primarily after consumer tech encourages a paradoxical outcome: citizens are less (not more) gratified and willing to interact with their governments. The overlap between the consumer' and the citizen's persona encourages in the latter expectations that digital public services are unable to fulfil. Furthermore, it oversimplifies the idea of public service, by suggesting that decision-makers should always deliver rapid and effective responses to complex issues.

The conclusive part of the proposed article explores three options to redesign digital public services: first, to elaborate a storytelling approach to digital government that shifts the focus from immediacy to complexity; second, to frame digital public spaces with a focus on the interactions, not the outcomes; third, and finally, to encourage civic *engagement* through creative approaches (via game-design elements, for instance).

2. Instant gratification of individual needs. The «cult of velocity»

Car-sharing service Uber comes with a simple promise for customers, «tap a button, get a ride». Like most technology-centred companies, the service offered is swift and enticing. With just a few finger-taps on a smart phone screen, customers can get what they want without the hassle of phoning a call centre or filling-in an online form. Similarly, the one-touch service from PayPal is based on the concept of immediate satisfaction. Once activated, users can shop online, freed from the formalities and «effort» of authentication. Until 2019 Amazon's «Dash Buttons» allowed customers to quickly reorder popular household items with a press. After being discontinued, the baton of e-commerce on the world largest online retail shop passed to voice commands.

In contemporary society, instant gratification of individual needs has become the standard to assess the quality of digital services and products. Speedi-

ness and user-friendliness are the guiding criteria of technology's qualitative assessment.

Technology relates to time in inverse proportionality ratio. The shorter is the interval between the action performed by the user and the expected result consequential to that action, the higher is the satisfaction for the service. On average, our physical interactions with mobile devices conclude within 72 seconds (Budiu 2015). Technology essentially encourages a utilitarian understanding and use of time. It wasn't always so. It is only at the beginning of 12th century that a work of artifice – i.e., mechanical clocks – started the process that would soon result in time being regarded as a commodity (Landes 2020). The consequential step was creating a link between fast execution of a task and efficiency.

Measuring – and thus saving – time for the sake of efficiency grew in popularity at the turn of the 19th century. In 1909, Filippo Tommaso Marinetti's «Manifesto of Futurism» magnified the *bellezza della velocità* (Marinetti 1914) Four years later, Frederick Taylor brought the chronometer into the factory. Taylor, an intellectual leader of the «Efficiency Movement», suggested that industrial efficiency could be improved through measurement and standardisation of workflow (Taylor 1913). Prior to Taylor, Karl Marx had already suggested that workers should be compensated after the quantity of time they spent on the production side (Magun 2009).

It is also in early 20th century that technological innovation and human thinking progress toward (and so contribute to) reshaping common understanding of time. The spread of steam locomotive powered through physical constraints allowed humans to overcome the limitations of geography. While the railroad compressed distance, the telegraph condensed time, impacting on how information travelled.

Beginning with Emile Durkheim in 1915, social scientists, legal theorists and economists began studying time in social and political life. The pace and speed of politics became object of study and debate (Scheurman 2004; Rosa and Scheurman 2009). The evolution of the meaning of the word «deadline» may be used as an example. Prior to the twentieth century, deadlines demarcated a specific territory, and specifically the line around a military prison beyond which anyone attempting to escape would be shot. The current signification of the word – a moment past which an assignment or task would be considered late – became of common use from the 1920s (Cohen 2018).

It is only with digital technology, however, that a «cult of velocity» has been created. Digitalisation has made profound and unprecedented impact on our societies and economies. In the digital era, social status stops being meas-

ured according to the amount of time worked, and begins being assessed according to the speed of web connection.

Immediate feedback lies at the backbone of the digital economy. Financial markets are a case in point. A mere fraction of a second can be decisive to successfully securing the trading of securities in the stock exchange. Capital is made, or lost, in a matter of seconds. On May 6, 2010, the «Flash Crash» of the United States stock market resulted in a 9% drop of the Dow Jones Industrial Average in less than thirty minutes. The Us Security and Exchange Commission and the Commodity Futures Trading Commission identified the cause of the crash in the malfunctioning of a computer algorithm used to trade securities¹. Operating from 2011, the undersea cable connecting North America to Europe saves 5 milliseconds to complete financial transactions².

Accelerationism is so widely – and often uncritically – accepted and celebrated, that it has even created a label to describe those who instead resist to linking modernization to social acceleration. The «slow down modernity» movement suggests unhasty tempo as a pre-condition for enhanced mental and physical well-being, ethical life, and even a more accountable democracy (Vostal 2017; Bauman 1990)³.

3. Does technology need to be fool-proof?

The second standard that drives the quality of technology – i.e., user experience – also took years to develop. The notion that technology needs to be easy-to-use can be traced back to 19th century. In 1888 Kodak was about to commercialize its first non-professional photo camera model. George Eastman, the founder of the company, came up with a catchphrase destined for tremendous success in the years that followed: «you press the button, we do the rest». First photography, followed by telecommunications, and then mobility and services: everywhere in the West, «ease of use» has become a reference standard for technology (Plotnick 2014).

Today, the directness of the interactions with new technologies determines its market success. Technology and the ease of use are bound together in a direct proportionality ratio – at times, this relationship is almost osmotic.

¹ See Security and Exchange Commission and Commodity Futures Trading Commission (2010).

² It is estimated that roughly \$10 trillion in financial transactions are transmitted via cables each day (Sunak 2017).

³ This makes of slow a «commodity». One needs material and financial resources to prepare food and cook all day, to buy watches and tune into the slow watch community.

Technological innovation is, in fact, simplification itself. For this reason, users' incompetence has ceased to be a limitation. It has turned into an asset.

Mass technologies are necessarily fool-proof. Machines and technological products start being designed to augment human limitations and in turn encourage lazy or untrained users. Microsoft's user interface, dating back to 1987, was among the earliest forms of software to adopt this design approach. Two years after, the first iMac was commercialized with a one-page operating manual. The user was invited to plug in the computer, and turn it on. It is at this point that – to put it with John Maeda's words – «simplicity began to equal sanity» (Moeda 2006). Dvd players with too many menus, software accompanied by thousand-pages manuals, remote controllers with plenty of unnecessary options – in short, all technology that seems too complicated – turned into something to be avoided, or even to be rebelled against.

Maeda makes two important points in his book. The first concerns the cost of simplicity. Technology, he claims, makes a good exception to the rule according to which a simpler, and faster, product is also more expensive. A direct flight is more expensive than a flight with one or more connections, for instance. Instead, technology can deliver news at almost real time speed, with no additional cost for users. The second point made by Maeda concerns the existence of a link of mutual need between simplicity and complexity. The more complexity is on the market, the more something simpler stands out. And because technology continuously grows in complexity, there is a clear economic benefit in adopting a strategy of simplicity that could help to set a product apart.

With mobile phone technology, user experience escalated to a new level of ease. Of the thousands physical interactions, we have with our mobile phones every day, the vast majority are completed via a few taps on the screen (Winnick 2016). We only need ten actions to buy a product on Amazon. Nine touches allow us to book a flight, and in a mere six we can have food delivered directly to our door. On a website, the «three-clicks rule» makes the current standard of the average interactions needed to access the requested information (Zeldman 2015).

4. Singularity and gratuity

The third and fourth standards driving commercial technology are singularity and gratuity, respectively.

Digital individualism was epitomized by Steve Job's 1998 celebrated presentation of the iMac. In this occasion Jobs illustrated the meaning of the

«I» – standing for «Individual» – that, from that day on, would have accompanied Apple's products. Singularity means that our experiences with digital services and products are designed to be special, unique, and to some extent extraordinary. The food we buy via delivery apps is not just good, is the tastier and healthier for our needs and financial resources. The route indicated by the digital navigator installed on our mobile phones or cars is the most convenient to reach our destination. The parking slot indicated by the dedicated mobile apps is the closest to the restaurant or theatre where we are meant to spend the evening. Even the partner suggested by dating apps' algorithms is not just a simple match. It is presented to us as our potential soul mate. The success of Tinder as well as other dating apps is explained by the fact that they offer never-ending prolongations of the satisfaction we get from imagining, searching and finally finding our perfect partner.

Pricing is equally personalized in the digital technology market. Many digital products and services are not priced according to production and marketing costs, or according to per-unit revenue expectations. They are determined according to estimated spending capabilities of consumers. This reserve price (the maximum price we would be willing to pay for a service or a product) is influenced by our consuming habits, personal tastes and of course by our budget availability.

Scholars have gone as far as to suggest that norms could be personalized as well. With smart contracts, contractual terms can be tailored on contracting parties' needs and expectations. Cases in point range from medical responsibility to testamentary disposition, or even organ donations (Rush and De Franceschi 2021).

Digital singularity, however, has its downsides. It encourages an individual hypertrophy that makes the average consumer more demanding. We expect digital products and services to be delivered quickly, be easily accessible, tailored on our needs, and charged in line with our possibilities. We will return to this point.

Gratuity is the last characteristic of digital technology. Creating a new social media account is free of cost, as well as using a mobile app for buying food, booking a flight, making a bank transfer. To a certain extent, even digital products that may seem expensive for the consumer are in fact less costly than they could be. Case in point is the PlayStation 5 console. This product contributes negatively to the revenues of Sony, its manufacturer. Back in 2003 Sony declared a profit of 18 dollars with each console sold. Two years later the PlayStation 3 had a high asking price: adjusted to 2022 inflation it would equal to 659 dollars per unit, a price many complained about. The estimated manufacturing costs, however, raised up at 840,34 dollars per unit, with a net loss for the company of over 200 dollars per unit. In the marketing model of

Sony, however, such losses would be wiped away by the royalties payable by developers for each of the titles they would sell for this machine.

Gratuity – real or more often perceived – induces consumers to think that digital technology is affordable and will develop cheaper over time.

5. Low-fi digital aesthetics

Fast, reliable, intuitive, tailored for us and (occasionally) free-of-charge: consumer technology is designed to provide swift responses to users' demands, via simplified interactions. Instant-gratification of needs becomes the key yardstick for assessing customers' satisfaction.

According to the consultancy Gartner, more than two-thirds of marketers at business organisations say their firms compete primarily on the quality of customer experience they provide (Gartner 2018). A survey from Qualtrics reveals that in 2020, 80% of marketers expected to compete almost exclusively through the experience of their customers. No company would dare make major changes to its platform without first running experiments to understand how these would influence user behaviour (Luca and Bazerman 2020).

Yet the promise of quick rewards and access to (potentially unlimited) resources, is accompanied by new ownership's and service quality's fees.

To begin with, consumer technology transforms the way we relate to our possessions, and thus to ourselves and the world around us. This is especially true with streaming and other internet-based service consumption⁴. In such cases, customers stop to «own» objects (at least in its traditional understanding) and set their consuming habits to the intangible and ephemeral.

Digital owners, in other words, lack basic ownership rights, such as the right to repair and the right to sell. Take the example of the Self-Service Repair program announced by Apple in 2022. Undoubtedly this decision makes a huge change from Apple's traditional hostile approach to third-party repairs. Upon closer inspection, the decision reveals itself being an attempt by Apple to respond regulatory attempts worldwide to introduce a right-to-repair (Klyle Montello 2018). Apple clarified that a «vast majority» of customers should still visit professional repair providers to ensure their devices are repaired safely

⁴ Data are telling. In 2011 digital music sales surpassed physical ones. In 2016 streaming services took over digital purchases. In 2020 digital video game sales outplaced their physical counterparts. Art and collectible markets are also quickly moving to digital forms. At the same time, sales of physical objects are declining everywhere. Dvds are a case in point.

and reliably⁵. Furthermore, it remains unclear whether the parts will be available directly on Apple's website or only through Apple Support. As of 2022, Apple has been delaying the program due to component shortages caused by the pandemic and exacerbated by the Russia-Ukraine conflict.

Let us move to the second fee: quality. For the most part, products and services delivered through consumer technology are «Low-fi» (Mantellini 2020). The pictures we post on social media, the music we listen through streaming services, the news we consume through Rss feeds, online newspapers, blogposts, or podcasts are all qualitatively rounded down. On average, the quality of consumer technology is significantly lower compared to that of analogical (or professional) services and products.

Low-fi digital aesthetics is so overspread that it expanded to other areas, like political communication. Imperfection is elevated by several political leaders as a key characteristic of their approach to politics, transforming Lo-fi style into a new cultural hegemony (Barile 2019)⁶. «Hyper-leaders» measure their political influence through social media metrics (likes, followers and shares). In communicating to the electorate, they adopt the colloquial and demotic style of YouTubers and Instagram influencers, becoming often histrionic or even excessive (especially when compared to «traditional» politicians) (Gerbaudo 2018).

The consequences are plain to see. One is the irrelevance of contradictory political contents as criteria to assess political leaders' skills and aptitude to deliver. People no longer care about consistency. Nadia Urbinati explains how Low-fi political messages are constantly reframed and reshaped, and only exist in the moment in which they are created (Urbinati 2013). Another consequence is the depletion of the overall quality of language. Indeed, languages evolve and, similarly to a biological species, adapt to new styles and metrics⁷. However, lawyers and linguists express concern about the excessive simplification of language, exemplified by the abandonment of past tenses in favor

⁵ According to Apple, from 2019 to 2022 the company has expanded its repair network, including over 3000 Independent Repair Providers and more than 5000 authorized service providers worldwide.

⁶ Barile's analysis focuses on how Matteo Salvini, the political leader of the Lega, cultivates a link with his community through digital platforms. According to Barile, the repositioning of Salvini as a populist/sovereign leader is a consequence of the landslide of the middle class that has put the centrist parties into further crisis, determining the coming together of two opposed but complementary political formations – Movimento 5 Stelle and Lega.

⁷ The parallels between biological and language processes are well summarized in this article published by «The Economist», *Like biological species, languages evolve*, 12 November 2020, available here <https://www.economist.com/books-and-arts/2020/11/12/like-biological-species-languages-evolve>.

of present tenses, and encouraged by technology (think about the ephemeral messages introduced by the instant-messaging app WhatsApp) (Casini 2019).

6. Digitalised public powers and the problem of replicability

We said that technology intentionally delivers products of amateurish quality. Therein lies a problem. To what extent does the standardized approach of consumer tech impact upon societal and individual expectations, and echo the interactions between citizens and digitalized public powers?

I suggest that a correlation exists between consumer tech design and the format commonly adopted by public institutions in designing spaces for interactions and debate with their constituencies – online consultations, for instance. In spite of key differences in the target and the objectives, digital spaces for democratic interactions and consultation are inspired by (and designed after) consumer technology. This attempt from public regulators to adapt to the pace of technological innovation by replicating commercial technology's standards into digital public services is problematic on four counts: inclusivity, longevity, singularity and reliability.

First, virtual democratic interactions must necessarily be inclusive. Public regulators are obliged to offer a service that not only includes all interests, but it is also transparent and financially sustainable. Consumer tech on the other hand, can be – and often is – exclusive. Moreover, concepts like «technology», «digital», and «the internet» are not necessarily and inherently democratic as they are commonly narrated and perceived by the public. The physical components that make possible the exercise of digital public services, for example, are often the result of human and capital exploitations (Hindman 2008)⁸.

Second, public regulation aspires to durability, while consumer tech plans its obsolescence. Even the (few) existing exceptions to this principle – «sunset clauses», to name one – are meant to tighten the legal certainty and the stillness of the rule of law.

⁸ Hindman explains, with regard to the internet, that there is a net difference between speaking and being heard. If the web had given digitally literate individuals direct access to the equivalent of a printing press, by the mid-Twenties only a handful of citizen-run websites and weblogs had found a significant audience. This gap between few hyper-connected sites and countless websites struggling to find an audience is furthered by Google's page rank algorithm, that prioritizes websites that are already reputable. Second, if the internet made it easy for individuals to cooperate with like-minded people, it also reduced their capacity to listen to opposing and challenging viewpoints.

Third, with occasional exceptions, norms are designed to serve the interest of large and undifferentiated communities rather than targeting individual stakeholders. Thus, the principle of singularity permeating commercial technology is not applicable to digitalized public services. This explains why, along with the progresses made with the digitalization of public services, governments worldwide are investing resources to train citizens that lack digital competences and skills in order to enable them to interact digitally with public administrations. The pre-condition of digital government is that everyone, from everywhere, could access and benefit from it at the same conditions.

Fourth and finally, virtual democratic spaces differ from consumer tech in terms of reliability. Consumers are always offered the chance to opt out and adopt cheaper or more functional alternatives. As famously pointed out by Albert Hirschman (1972), consumers have two ways to express discontent with organizations with which they do business. They can either voice their complaints, while remaining customers, in the hope that the situation will improve; or they can switch to competing products. According to Hirschman, the latter option is also available to citizens and interest groups in a given political system (Hirschman 1972). Yet, he adds, the decision to exit from the government is deplorably infrequent.

However, if we apply the Hirschman's theory to the domain of technology and public service, we can reasonably argue two things. First and foremost, the former has expanded the number and range of possibilities for citizens to exit from (or voice against) public sector's organizations (Schrepele 2018)⁹. We can even go as far as to say that, differently from their analogic counterpart, within digital spaces silence and non-participation may empower citizens, as far as we conceptualize and describe them as passive forms of *engagement* (Pena Gangadharan 2021). Yet none of these considerations can actually reverse our initial assumption. There is no solid alternative for citizens to opting out from participating to policy-making via digital tools, and re-engaging via a different, yet more functional or better designed, digital tool. The second conclusion we reach by observing the interplay between digital technology and public services is paradoxical: unsatisfied citizens, compared to consumers, have lower political impact.

⁹ Schrepele argues that blockchain's attributes allow for the creation of an ecosystem in which the rule of law cannot be enforced as easily as in the real-space. As a result, an individual may be offered new possibilities to escape, at least for certain digital activities.

7. Citizens and digitalised public services

The ambition of public regulators to shape digital administrative action after consumer tech's standards, on the one hand, and on the other hand the specificities of the public sphere, are at odds with each other.

The outcome is again paradoxical: citizens are less (not more) willing to interact with digitalized public powers. Look at it this way: the most advanced and potentially empowering technologies ever possessed by public regulators are returning the poorest results ever recorded in terms of interest, *engagement* and retention. Or, to put it more optimistically, they are discouraging meaningful participation from citizens.

This paradox is common across countries, sectors and levels of administration. Take Europe as an example. As of 2019, 64% of European citizens had used an online public service at least once (European commission 2020). Back in 2013, this figure was only 41%. When asked to comment on their experience, however, many reported poorly designed websites, unnecessarily complex procedures and problems with timing.

This disconnection between citizens and digitalized public services is characterized by diverging expectations. In digital public spaces, individuals' persona as both a citizen and a consumer overlap, as do their expectations. Luciano Floridi claims that separating offline from online spheres makes no sense in contemporary digitalized society. «Onlife», as Floridi names it, describes a status of hyper-connection, in which we find ourselves holding multiple identities at the same time, both virtual and real.

Onlife – later turned into a Manifesto (Floridi 2014) builds upon four major cultural and societal transformations: the first and the second consists of the blurring of the distinction between reality and virtuality, on the one hand, and of the distinction between human, machine and nature, on the other hand. The third transformation addresses the reversal from information scarcity to information abundance. The fourth and final transformations concern the shift from the primacy of stand-alone things, properties, and binary relations, to the primacy of interactions, processes and networks.

The divergence of expectations is particularly evident in the case of public online consultations. Participants often lament online consultations occurring late in the legislative process. Another recurrent complaint regards inadequate feedback. Citizens engaging in digital interactions with the public sector expect rapid feedback, but often receive delayed, inadequate or even non-existent responses.

The 2019/2020 French *Convention citoyenne pour le climat* makes a good example. The «Grand Débat» was held in France from January to April 2019,

led by two ministers and a «Collège des Garants» and organized by a dedicated taskforce («Mission Grand Débat»). The initiative made use of 6 different and complementary formats, including a web platform that received over 1.5 million contributions from citizens¹⁰. All of these processes were designed with the help of participatory democracy experts, and the discussion methodologies were prepared through a long development process involving, in the case of the «Grand Débat», the members of the «Collège des Garants», who were in charge of ensuring compliance with the key principles of the debate.

The outcomes, however, were not positive. According to 150 randomly picked members from the public who met on March 2021, the French government did not perform well in «implementing» any of the six main topics (i.e., housing, transport, food, consumption of natural resources, production, and work) on which the citizen's climate convention worked. Citizens rated the implementation phase with an average 6.1 out of 10 points.

In the French case, as well as in similar cases, it is arguable that the trust relationship between citizens and the public administration was damaged instead of being reinforced by the digital interactions occurred between the former and the latter.

Another recent example is the Conference on the Future of Europe, that was permeated by the idea that it should be fast and efficient since its inception, on May 9, 2021¹¹. Yet the outcomes of the Conference were unclear. It was not clarified how and when European citizens' opinions would impact on future Europe. The three institutions jointly charged of the Conference shared different views on the outcomes, ranging from interpreting the Conference as a vehicle for institutional reforms (including Treaty changes) to viewing it as a forum for broad reflection and debate (Wolff *et al.* 2021).

¹⁰ A total of 1,932,884 online contributions were made, 10,134 local meetings were held, 16,337 municipalities reviewed submissions from participating citizens, and 27,374 letters and emails received. The 21 Grand Débat conferences, in particular, were divided into three categories: 13 were held in the regions of mainland France, 7 overseas, and 1 at the national level specifically for young people. Events took place simultaneously over two weekends (March 15-16 and 22-23) and followed the same protocol, from coming up with a joint diagnosis to presenting collective proposals, alternating between group and plenary work, with the help of facilitators.

¹¹ France President Emanuel Macron insisted on democracy to be fast and efficient in his introductory speech to the European Parliament in Strasburg, suggesting that the authority of democracy is «the only answer to authoritarianism», and this authority «can only be won through efficiency and speed». The speech is available at this website: https://multimedia.europarl.europa.eu/it/conference-on-future-of-europe-inaugural-event_18901_pk.

8. The rhetoric of the digitally efficient government

Design plays a key role in Floridi's account of Onlife. Combined with discovery and invention, it is one of the driving elements through which cultures and societies may innovate. Our age – adds Floridi – is quintessentially (and more than any other) the age of design.

This makes the quest for «good» digital design a modern challenge. Hence the question: how should digital public services be designed?

As a preliminary reaction to this question, we should acknowledge the limits of digitalized government. The misconception about the digitally efficient government has been fueled by a widespread rhetoric of digital government as paradigmatic of effective government. For decades now, public regulators have, if not openly encouraged, nonetheless refrained from demystifying citizens' expectations in digital public services. Governments have been the first to popularize the idea of fast, simplified and effective public decision-making through technology. But the moment we popularize the idea that digital services are fast, easy to use, transparent and efficient, we inevitably postulate that public decision-making is only effective when it delivers rapid and effective responses to the issues of the day, regardless of its complexity. In so doing, the risk that public expectations may be frustrated is augmented.

Digital public services could perhaps meet the expectations of citizens, but are inherently incapable of satisfying those expressed by consumers, for three reasons. The first is structural: due to anachronistic structures, public administrations may be unprepared to meet technological challenges, or may be too slow at adapting to the fast societal changes imposed by technology (Noveck and Glover 2019). The second reason is procedural: increasingly complex regulatory issues demand for coordinated solutions across actors, sectors, and skills (Gray and Purdy 2018; Innes and Booher 2018). The third reason is cultural: safeguards from market competition for public regulators means they have limited incentives for change.

The global health crisis that emerged in 2020 exacerbated this divide. On the one hand, the crisis accelerated the digital transition of the public sector, forcing public regulators to shift from analog to digital services. This was certainly a positive outcome. Several legislative bodies across the world decided to shift their activities online temporarily. The quick shift to digital venues, on the other hand, revealed the dramatic divide separating the imaginary of digital democratic governance from reality. The toxic combination between short-sighted digital initiatives, technical problems and ill-framed communication strategies, together with pre-existing problems that remained unsolved,

has once again shown the urgency of coherent design-approaches to digitalized public services that could effectively meet the expectations of citizens.

9. Beyond performance: the design of digital governance

From the considerations above, one key lesson can be drawn: the primary challenge for digital public services is design- rather than performance-related. Digitalized public governance should focus more on welcoming those interested in participating, or engaging those undecided whether to interact with decision-makers, and less on meeting citizens' expectations.

So, what should be re-designed exactly? After all, the suggestion that public administrations could be designed to meet specific goals or fulfill specific needs is far from new. Already in 1969 Herbert Simon imagined a «design science» applied to public administration (Simon 1969). Simon argued that public administrators ought to diagnose problems and devise optimal ways to deal with them. Drawing on Simon, scholars speculated about optimal design options for public services (Ostrom 1974; Miller 1984; Radine 1987; Shangraw *et al.* 1989; Lietdka 2018; Howlett 2014). In the last decade, designers have finally played a role in designing the relationships between legislators, communities and technology¹².

Today, design-based approaches are credited with opening up new options to policy-makers, and thus helping them to explore potentially more effective regulatory solutions. This includes online consultations and similar initiatives aimed at engaging citizens in policy-making via digital tools. Public regulators, at both national and supranational levels, explore design with the goal of addressing more efficiently citizens' needs and expectations (Bason 2014; Fisher and Gamman 2019; Ehn *et al.* 2014; Ibm 2018).

So, what should be re-designed? Three actions are key to sustain highly-performing digital government: first, elaborate a storytelling approach to digital government that shifts the focus from immediacy to complexity; second, frame digital public spaces with a focus on the interactions, not the outcomes; third, and finally, encourage civic *engagement* through creative approaches (through game-design elements, for instance).

¹² See, for instance, Observatory of public sector's innovation, service design toolkit, available at <https://oecd-opsi.org/guide/service-design/>; Nesta, Designing for Public Service: a Practical Guide, available at <https://www.nesta.org.uk/toolkit/designing-for-public-services-a-practical-guide/>

10. Three ideas to promote high-performance digital government

In order to re-imagine the aesthetics of digital government, three possible interventions need to be made. The first involves the framing (or re-framing) of digital services to focus on the interactions between citizens and public administrations, rather than the outcomes. The second recommends building a narrative of digital government. These stories should stress the sense of belonging of digital public services to a broader, more complex and stratified decision-making process. The third proposes to enhance creativity, through behavioral approaches for instance, in order to attract citizens to participate in public decision-making.

Let us see these options in more details. Aesthetically, current digital interactions between citizens and public administrations are based on a simple formula: replicating reality in a virtual scenario. Examples include virtual desks, or rooms (also virtual) where users gather and queue virtually.

This formula, however, is not without problems. The first (and most important) problem lies in the difference between a product and a service. A digital interaction framed within a specific timing responds to the idea of a product. Users are allowed to enter at given times and days, and only for a given amount of time. A service, on the other hand, is activated as often as users need it. Private digital platforms are designed with this approach in mind. Content such as a Facebook post, a picture on Instagram, or a *tweet* on Twitter – help feed an ecosystem of interactions in which the author of the content, and recipient overlap. Additional problems stemming from the replication of reality into virtual scenarios consist of lack of effective ways to assess users' satisfaction and to communicate with them (emails, by far the most frequently used communication tool, create gaps between the moment in which the user writes the message and the answer to that message, with potential negative impact on the quality of the service).

Re-designing digital interactions in terms of a service – and thus focusing on the interaction per se rather than the outcome symbolized by the product – may help to move forward the «democratic myopia» described by Graham Smith in his last book, dedicated to understand how and whether democracies could be designed to give due weight to the interests of future generations. In Smith's opinion, democratic myopia consists of the tendency of democratic systems to be shortsighted – i.e., not adequately considering the long term. Smith describes four causes of this myopia (the non-presence of future generations, the electoral cycles, the resistance from incumbent interests, and the dynamics of the capitalist system) and indicates future-design among

the solutions to solve this *issue* (Smith 2021). Yet, I claim, to effectively future-design digital interactions we need to move further away from a mere replica of physical spaces in a digital scenario. We have to reconceptualize these spaces as a service.

A second recommendation consists of building a narrative of digital government. In fact, the *issue* of expectations and that of comprehension are strictly related. Political unintelligibility is primarily a democratic problem (Innerarity 2021). Citizens' actual competences and the expectations they put into a democratic society that is politically competent are unevenly balanced. To overcome, or at least reduce, this unintelligibility, scholars suggest improving individual knowledge, and simplifying messages to avoid misunderstanding. To this end, storytelling becomes essential. One such example is Witness, an online open-source participatory space where economists and science fiction writers imagine a range of plausible and economic scenarios¹³.

A third and last option to motivate citizens to interact with digitalized public services in a more satisfactory way is to make use of behavioral incentives, like nudges or game-design. Albeit these tools have not proven yet fully resolute for the problems of contemporary democratic systems, in some cases have obtained good results and are being experimented by more administrations. In their popular book on nudge theory, Richard Thaler and Cass Sunstein (2008) suggest that nudges may be used to promote (a more preferred) collective behaviour, rather than obstruct it. Nudges – argue Thaler and Sunstein – may help regulators to avoid some of the challenges and potential pitfalls of traditional regulation, for example costly procedures and ineffective campaigning, or invasive choice regulation, such as bans. Theorists of nudge postulate that citizens who are provided with social clues or given a direct voice in decision-making will probably increase their willingness to participate and do positive things for themselves and society. By the same token, gamification strategies are premised on the idea that games embody great potential in capturing citizens' attention and stimulating their interest with fun (intrinsic motivator) as well as rewards (extrinsic motivator) (Sgueo 2018).

11. Concluding remarks

At the end of this journey into the design of digital government, and specifically within digital democratic spaces, a few compelling questions still

¹³ For further info: <https://edgeryders.eu/t/different-economic-systems-one-floating-megacity-introducing-witness/15358>.

remain unanswered, or only partially answered. These questions lay the foundations for a future research agenda on the design of digital public services.

To quickly recap, we began by asking to what extent is design of digital public services effective in addressing citizens' needs? We clarified that the replica of consumer tech is more likely to produce ineffective than effective outcomes (in terms of citizens' satisfaction, trust in public administrations and willingness to contribute to policy-making). We therefore moved to investigate what options could be used. This led us to reconsider traditional understanding of digital public service. Desirable features for a functional digitalized government are complexity, narration and creativity. This would bring on the table new questions, such as the parameters to be used to assess the effectiveness of digital public spaces. Scholars (Ginsborg 2018) suggests looking at civic empowerment (public services are effective as far as they contribute to develop larger circles of critical citizens, capable of dialoguing with public institutions) and cultural transformation of politics (digital government is effective insofar it promotes a more responsible and informed political class).

To date, regulatory attempts to implement the reformative agenda of digitalized public services have been sporadic. With digital transition progressing across Europe and beyond, this will become a central question for the innovation of the public sector.

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