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Exploring Defuturing to Design Artificial-Intelligence Artifacts: A Systemic-Design Approach to Tackle Litigiousness in the Brazilian Judiciary

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Abstract: From the perspective of defuturing design philosophy, this article discusses the close relationship between the growing body of artificial-intelligence (AI) artifacts in the Brazilian Judiciary and the phenomenon of litigiousness therein. Litigiousness has traditionally been tackled through mechanisms that increase productivity and efficiency in case processing, a strategy that has not succeeded in reducing litigiousness, as data make evident. Analyzing data from relevant sources, this article demonstrates that AI artifacts mostly perform tasks related to clustering and mass handling of cases, following the same path dependency. Consequently, they entail risks of judges' alienation and loss of agency, which can negatively impact citizens' fundamental rights. Moreover, they defuture; that is, they erase other (preferable) futures. Albeit AI artifacts can play a part in tackling litigiousness, there should be a critical reflection upon futuring and defuturing. Therefore, this article recommends that SoDF—a systemic approach to design that seeks to explore design consequences, futuring and defuturing—be mandatory to any AI design process. Additionally, it proposes continuous judicial monitoring for alienation and loss of agency, as well as investments in judicial education to empower judges to effectively control and supervise AI artifacts. Finally, it suggests a further research agenda.



Citation: Münch, Luciane Amaral Corrêa, and Taís Schilling Ferraz. 2024. Exploring Defuturing to Design Artificial-Intelligence Artifacts: A Systemic-Design Approach to Tackle Litigiousness in the Brazilian Judiciary. *Laws* 13: 4. <https://doi.org/10.3390/laws13010004>

Academic Editors: Pedro Miguel Alves Ribeiro Correia, Ricardo Lopes Dinis Pedro and Fabrício Castagna Lunardi

Received: 16 August 2023
Revised: 1 October 2023
Accepted: 10 November 2023
Published: 11 January 2024



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Keywords: defuturing; path dependency; artificial intelligence; litigiousness; design; innovation; productivity; alienation; agency; Judiciary

1. Introduction

The development of artificial intelligence (AI) applications and systems is a process of design, understood as 'the conception and planning of the artificial' (Buchanan 1992). As outcomes of design processes, such applications and systems can be denominated 'AI artifacts' and constitute design innovations.

Defuturing design philosophy (Fry 2020) discusses design innovation as an agent of both creation and destruction, bringing about risks of loss of agency and alienation. It highlights the narratives underpinning fictions of progress and a celebration of the new (Perera and Fry 2022), which impel innovation resulting from path dependencies (Loorbach 2022) that work to perpetuate existing systems and values. As such, these design processes lack critical reflections on whether innovations might be unsustainable or erase other futures (*defuture*).

The Brazilian Judiciary presents a high level of litigiousness, which has mostly been dealt with through linear, efficiency-oriented mechanisms. Even though it has also implemented mechanisms aimed at containing litigiousness, a simple look at the 2023 National Council of Justice's goals for the Judiciary (hereinafter NCJ's Goals) hints at a path dependency (Loorbach 2022) toward productivity and efficiency in case processing. Within this context, it is noteworthy that investments in design of AI artifacts have proliferated in the last few years. Therefore, if this proliferation follows the same path dependency, such a linear strategy of dealing with litigiousness might erase other futures (*defuture*), which could be preferable had a systemic approach to the problem been taken. It might entail risks

of judges' alienation and loss of agency, a feeble prospect for agents in charge of protecting and respecting citizens' fundamental rights. Moreover, it might even feed litigiousness, the very phenomenon it should tackle. In a nutshell, it might prevent real change.

In light of design defuturing philosophy (Fry 2020), this article investigates the narrative around the growing body of AI artifacts, both under development and already implemented, in the Brazilian Judiciary. This is an original, new perspective, which applies a design—more specifically, a design defuturing—approach to look at AI development and implementation as a judicial policy to tackle litigiousness. Moreover, it brings up a necessary debate on whether tech revamping efficiency and productivity might really tackle litigiousness, or just reinforce old patterns and strategies with increasing risks of harming citizens' fundamental rights.

This article sets from the hypothesis that the growing body of AI artifacts in the Brazilian Judiciary is mostly oriented to increase productivity and efficiency in case trials, which follows from a path dependency that approaches litigiousness from a linear, non-systemic perspective. Thus, it initially presents data that support such a view.

Furthermore, this article briefly exposes defuturing philosophy, presenting the concept of Second-order Design Futuring. Additionally, it discusses the findings in light of this theoretical framework.

Finally, it offers some proposals regarding the design of AI artifacts for the Brazilian Judiciary, including suggestions for further research, that embody a systemic perspective. Such proposals can be replicated or adapted by other national or foreign public bodies when designing AI artifacts.

2. Methods

Based on design defuturing philosophy (Fry 2020), this article investigates the dominant narrative behind the growing development of AI artifacts in the Brazilian Judiciary as a means to tackling the problem of litigiousness therein. Thus, it brings forward bibliographical references to expose defuturing theory and its implications for designing innovations, discussing the concepts of design defuturing and Second-order Design Futuring (SoDF).

Furthermore, it discusses litigiousness related to the Brazilian Judiciary, and the strategy adopted to counter it. Therefore, it presents data from the National Council of Justice (NCJ), particularly referring to the National Council of Justice's 2022 report denominated "Justiça em Números" (NCJ 2022a) (hereinafter NCJ Judiciary Review), which provides a full picture of the Brazilian Judiciary, and to the current (2023) NCJ Goals (NCJ 2022b).

Moreover, in order to establish the main narrative behind the growing development of AI artifacts in the Brazilian Judiciary, and which problems such artifacts must solve, this article assesses data from the two most relevant data sources existing on the subject. The first data source is the survey on technology applied to conflict resolution in the Brazilian Judiciary, promoted by Fundação Getúlio Vargas (FGV) under the coordination of Luís Felipe Salomão (FGV 2022) (hereinafter, FGV AI Survey). To date, the FGV AI Survey has been the most extensive data survey on the development of AI artifacts in the Brazilian Judiciary (FGV 2021). The second data source is the National Council of Justice (NCJ)'s panel comprising the results of the 2022 research on AI and the Judiciary (NCJ 2022c) (hereinafter NCJ AI Panel).

Firstly, it assesses AI artifacts currently implemented or in development in the National Council of Justice and Brazilian tribunals with respect to the problems they are designed to solve and how they operate accordingly. It bases the assessment on the data presented in the FGV AI Survey.

Secondly, it assesses the NCJ AI Panel. Although the panel does not have the same level of extension and systematization presented with the FGV AI Survey, it contains information that can provide important insights for this article's inquiry. In particular, it provides a list indicating tribunals' motivations to set up AI artifacts.

Thirdly, it compares the data found in the previous steps with that presented in the NCJ Judiciary Review and NCJ Goals, with a view to evidencing how the growing development of AI artifacts in the Brazilian Judiciary mostly responds to the traditional strategies of dealing with the problem of litigiousness therein.

3. Findings

3.1. Litigiousness in the Brazilian Judiciary: NCJ Judiciary Review and NCJ Goals

This subsection presents the findings on litigiousness in the Brazilian Judiciary, based on the NCJ Judiciary Review and NCJ Goals.

Litigiousness, for the purposes of this study, is the phenomenon that becomes evident through the substantial influx of new cases into the judicial system, the high rates of appeals in response to judicial decisions, the resulting court overload and the use of violent discourse between litigants and judges.

According to NCJ Judiciary Review, the year 2021 ended with more than 77 million pending cases in the Brazilian judicial system (NCJ 2022a, p. 120). The curve of new cases, with small oscillations, has remained extremely high, as shown in Figure 1:

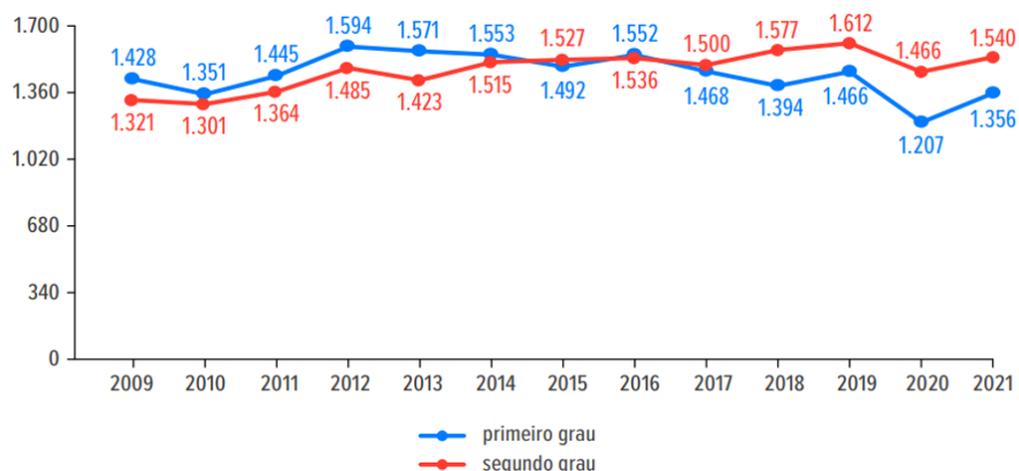


Figure 1. New cases by judge—time series (NCJ 2022a).

Notably, in 2020, the first year of the COVID-19 pandemic, there was a more significant decrease in the number of new cases, possibly due to the need to transition the entire Judiciary to the virtual environment. However, the curve started rising again in 2021, reaching numbers very similar to those found in 2009, when the monitoring process of this indicator began (NCJ 2022a, p. 108).

Productivity, measured with the ratio between the number of cases resolved and the number of judges, followed a similar pattern (Figure 2). This metric has displayed a progressive trend since 2014, reaching its highest value in the time series in 2019 (2112 cases per magistrate). In 2020, it experienced a decline, possibly due to the pandemic, but rebounded in 2021. Judges' workload has been on the rise since 2009 and, after a slight reduction in 2020, reached an average of 6411 cases per judge in 2021 (NCJ 2022a, pp. 117–20).

The congestion rate remains high (Figure 3), representing the percentage of cases that were held back without solution, compared to the total processed in the period of one year (NCJ 2022a, p. 127). The higher the index, the greater the court's difficulty in dealing with case backlog (NCJ 2022a, p. 127). The demand response rate reflects the court's capacity to handle the volume of filed cases (Figure 3). The global indicator points to the increase in stock by 1.5 million lawsuits (NCJ 2022a, pp. 126–27).



Figure 2. Productivity per judge—time series (NCJ 2022a).

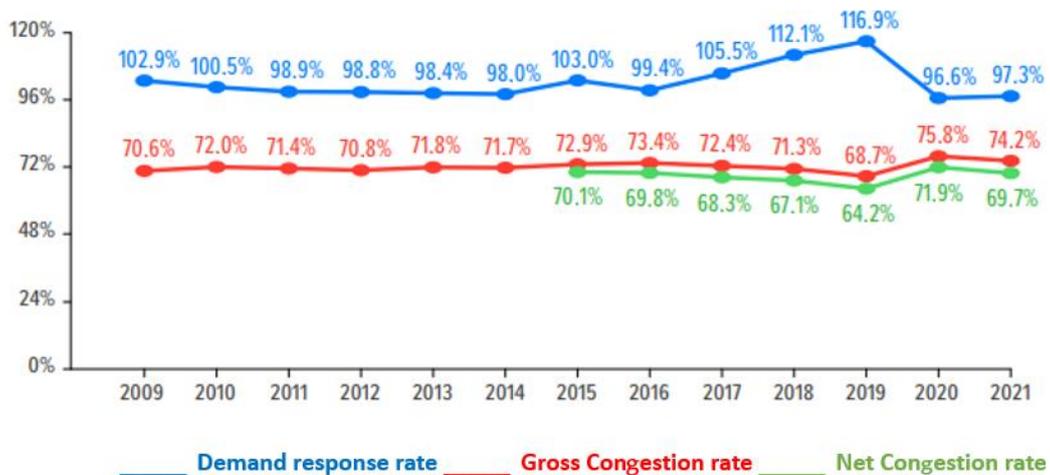


Figure 3. Congestion and demand response rates—time series (NCJ 2022a).

Indicators of appeal against judicial decisions also reveal that the phenomenon has not been reduced (Ferraz 2023, p. 10). Notably, at the Supreme Court, the Annual Activities Report (SC 2022, pp. 29–37) shows that the decline in appeals originating from other instances (external appealability) was offset by an increase in appeals against the Court’s own decisions (internal appealability). Among the 89.9 thousand decisions handed down in 2021, 13.5 thousand resulted from internal appeals only.

The NCJ has traditionally responded to excessive litigiousness with and largely through productivity- and efficiency-oriented measures. Set up in November 2022, NCJ Goals for 2023 corroborate such affirmation: among eleven national goals, nine correspond to productivity targets to be attained in cases before courts (NCJ 2022b). The same strategy can be found in previous years (NCJ 2020a, 2021).

3.2. AI Artifacts in Brazilian Judiciary: FGV AI Survey and NCJ AI Panel

Findings in this subsection originate both from the FGV AI Survey and the NCJ AI Panel. They provide a full picture of the AI artifacts designed for the Brazilian Judiciary and offer some insights on the motivations behind their development.

3.2.1. The FGV AI Survey

In 2022, the FGV AI Survey identified 54 AI artifacts in Brazilian tribunals, in different progression stages: development, undergoing implementation or implemented. Nevertheless, all artifacts were relatively recent, dating from 2019 to 2021. Therefore, this research makes no distinction based upon such stages.

Among the 54 AI artifacts, 39 (72.2%) are directly related to identifying and grouping cases according to similarities, in order to optimize workload, reduce the length of proceedings, increase productivity and achieve consistency. Hence, they are designed to perform tasks such as forming case batches for procedures and trials; analyzing appeal admissibility and suggesting applicable precedents; identifying and indexing petitions and court decisions in appealed cases; assisting in drafting court decisions by association with former rulings and jurisprudence; checking petitions' formal requirements in tax enforcement cases; assisting citizens to file complaints before small-claims courts; predicting the likelihood of conciliation in cases before labor courts; forecasting court rulings and predicting appeal outcomes based on previous case law; handling the expedition and notification of court orders, including citation; extracting information from insurance policies offered in executions before labor courts.

Another five AI artifacts (9.2%) perform the task of reading the initial petition and classifying them according to their subject. This classification follows NCJ's indexation rules, and is useful for statistical purposes. Nevertheless, it also allows identification and grouping of cases, according to similarities, to achieve the goals described in the previous paragraph.

Furthermore, there are two AI artifacts (3.7%) built to help judges investigate whether the parties to a case are entitled to a waiver of costs. Another three (5.5%) are operational, performing case digitization and system-related tasks. In addition, there are two (3.7%) facial recognition systems, for access to court premises and prisoner control, and one (1.8%) artifact for hearing transcriptions, two (3.7%) for court management and one (1.8%) for online conflict resolution, before court litigation.

In 2023, the research team visited five courts, whose AI artifacts were already in production, to deepen the investigation. Three new artifacts appeared in the report, two of them performing tasks such as clustering, indexation and classification. The remaining artifact performs address searches for the notification of court orders.

3.2.2. The NCJ AI Panel

Brazilian courts have administrative and financial autonomy, allowing them to organize their services. In relation to technological resources, courts can thus adopt available technologies or develop new ones, using resources from their own budgets. This means that a local court can develop AI artifacts.

However, the National Council of Justice (NCJ) created a platform where technological solutions developed by the courts can be shared. This initiative is aimed at providing unity to the Judiciary, in addition to developing various automation solutions and making them available to the courts.

Within this perspective, the NCJ initially determined that courts should adopt sharing-compatible parameters when developing their Information and Communication Technology (ICT) systems and tools. For this purpose, the National Interoperability Model, by means of a Technical Cooperation Agreement (NCJ 2020b) was put into place.

In 2020, NCJ Ordinance No. 7 (NCJ 2020c) created the National Repository of Projects and File Versioning of the National Council of Justice (Git-Jus), for project tracking and file version control. It is open to all courts, judges and staff, serving as a central digital repository of projects and providing an environment for collaboration and innovation for the Judiciary "<https://git.cnj.jus.br/>" (accessed on 1 October 2023).

Specifically regarding AI, the NCJ created the Sinapses Platform (NCJ 2020d) for the storage, supervised training, version control, distribution and audit of AI models, as well as the establishment of parameters for their implementation and operation. The management and responsibility for the models and datasets lie with each of the Judiciary's courts, and NCJ is responsible for maintaining the platform.

AI projects that are under development or have been developed can be consulted, along with their impacts, at NCJ AI Panel (NCJ 2022c). Currently, there are a total of 111 projects (Figure 4), with 63 currently in production, and 42 already registered on the

Sinapses platform for monitoring and sharing purposes (NCJ 2023) “<https://www.cnj.jus.br/sistemas/plataforma-sinapses/paineis-e-publicacoes/>” (accessed on 1 October 2023).

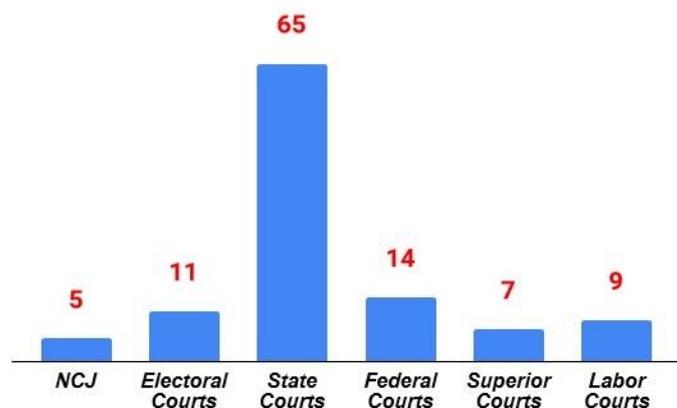


Figure 4. NCJ AI Panel—projects in Judiciary (2022c).

As stated before, the NCJ AI Panel does not have the same level of systematization presented in the FGV AI Survey. It simply reproduces the information received from different tribunals, presenting an uncategorized list of AI projects and artifacts. Thus, in some cases, the same artifacts appear more than once in the list, with an entry for each performed task. This makes it difficult to establish the exact amount of AI artifacts and projects that are directly related to certain objectives. Therefore, to avoid data distortion, this article looks at the different tribunals instead of the total number of artifacts and projects.

First, the Panel reveals that, out of 48 tribunals holding AI artifacts and projects, the NCJ and 38 tribunals (39) have AI-based artifacts and projects aimed at clustering and mass handling of cases. Other AI artifacts involve voluntary jurisdiction in electoral matters, chatbots to assist voters during elections, operational and management systems and the project of online conflict resolution mentioned in the FGV AI Survey. It is important to note that most projects and artifacts overlap with those presented in the FGV Survey.

Second, according to the Panel, the main motivation propelling 94 out of 111 projects is to increase productivity, in terms of the ratio volume of cases per time. Remarkably, ‘innovation’ appears in second place, impelling 88 out of 111 projects.

4. Discussion

4.1. Litigiousness in the Brazilian Judiciary and the Growing Body of AI Artifacts: Addressing Litigiousness in a Linear Way

Within the framework of the litigiousness phenomenon, interactions happen producing discernible behavioral patterns captured by monitoring systems. These patterns are propelled by deeply rooted mental models, beliefs and values intrinsic to Brazilian legal culture (Ferraz 2021).

Diverse and constantly changing issues materialize litigiousness. Conflicts ranging from individual, homogeneous rights to social, collective and diffuse rights produce the filing of large-scale lawsuits (Clementino 2016; Bezerra 2016), bringing claims that range from a discussion between neighbors to environmental decontamination, passing through the proposition of endless repetitive actions on countless topics. Such demands become the arena for multifaceted disputes, fought with violent rhetoric and surrounded by high rates of appeal.

The Judiciary in Brazil habitually deals with litigiousness in a reactive way, employing linear solutions. Through policies and actions aimed at managing and controlling overload caused by the influx of new cases and appeals, most initiatives are based on mechanistic perspectives (Ferraz 2023).

Various mechanisms embody this reactive approach, such as suppression of appealing possibilities, through successive normative changes; imposition of filters for appeal admissi-

bility, such as the prerequisites of general repercussion in the Supreme Court (CN 2004) and the relevance of federal questions in the Superior Court of Justice (CN 2022); establishment of defensive jurisprudence across all levels; development of standardized solutions for mass handling of repetitive claims; implementation of personnel and process management tools; and notably, use of technology to automate procedures. More recently, AI-based solutions are being developed to increase efficiency and prevent errors in the preparation and delivery of mass solutions for judicial cases. The COVID-19 pandemic has accelerated the use of technology in all sectors (Fülöp and Magdas 2022). The Judiciary was no different.

Data collected on the growing body of AI artifacts in the Brazilian Judiciary demonstrate that they are mostly designed to perform tasks enabling courts to enhance productivity, generally by handling large volumes of cases in batches. Approximately 80% of the AI artifacts therein, already implemented or under development, serve case clustering and mass handling purposes. Moreover, according to the NCJ Panel, the main motivation behind AI projects is to increase productivity in terms of a volume per time ratio, appearing in 84,6% of featured projects.

By setting productivity targets for judges and court staff at all levels, the institution seeks to finalize more cases in less time, mitigate the accumulation of pending lawsuits and handle a greater number of cases compared to the annual inflow of new lawsuits. Other alternatives are often conceived or put into practice, such as stricter criteria for granting legal aid, conditions for initiating lawsuits by occasional or habitual litigants and the imposition of pecuniary penalties on persistent appellants, among various techniques and creative tactics.

This approach predominantly addresses the visible symptoms of the phenomenon of litigiousness. However, litigiousness indicators, although essential for monitoring the phenomenon, do not fully represent what fuels it. A retrospective assessment of the historical trends in new case filings; congestion and appeal rates; and productivity reveals that the adopted solutions did nothing more than contain some select manifestations of litigiousness. While these mechanisms may yield certain outcomes, their long-term viability remains uncertain. Over time, the problem readjusts, finding new ways to manifest itself, and, moreover, seeming to feed back the systemic phenomenon.

Numerical representations of litigation patterns suggest that the mechanisms adopted so far for its treatment have not been effective in the long term. The explanation lies in the complexity.

Characterized by its complexity, litigiousness is a multicausal, multifaceted and contextually nuanced phenomenon, yielding numerous effects. Its effective treatment requires a systemic approach, attentive to the intricate interactions contributing to its diverse manifestations and the underlying motivations fueling them (Ferraz 2023).

In addressing problems, there is a tendency to seek and discern close causes and apply quick solutions to them. The expectation is that by acting on the factor identified as the cause, it will be possible to eliminate or control the unwanted effects. Such a mindset presupposes the existence of linear cause-and-effect relationships among elements of a phenomenon. Events are evaluated based on their external signs, by studying separately the behavior of each element that can be captured, measured, weighed (Ferraz 2021), and, given what is observed, action is taken directly on the element, seeking to change its behavior.

According to Senge (2006), reality is made up of circles, but human tendency is to see straight lines. Thinking systemically means seeing circles of influence rather than straight lines between events. Every circle encapsulates a story. By tracking the influence flows between various elements of a phenomenon, it is possible to visualize the patterns that are continually emerging (Senge 2006, p. 137), deciding on the best way to intervene, with some degree of predictability as to the consequences.

Variables contributing to the same result are arranged in a circle of cause-and-effect relationships, which is called the feedback process. Meadows (2008) warns that the linear way of proceeding often obscures the holistic perspective, disregarding connections, internal processes and interaction flows. Each element in a system is interconnected, interacting

with other elements and responding to stimuli. Neglecting these dynamic yields unforeseen interactions, which can nullify or counteract interventions or exacerbate overall system behavior.

Observing the behavior of each of the litigation indicators (new cases, appeal rate, congestion rate, productivity indices) is not enough to understand what has been producing the phenomenon. Individual elements do not replicate the behavior of the whole when analyzed separately. Observe a child playing alone versus interacting with peers or parents; behavior shifts depending on interactions with other elements and with the environment. Some properties only emerge when parts interact with each other or the system. These are the so-called emergent properties (Morin 1990).

The interplay between new cases entering each year, congestion rates and productivity rates possibly produces a feedback loop or reciprocal flow of influence. This flow can take the form of simple feedback (when system-generated information returns to the system to influence behavior, in a movement that forms a closed circle) or recursion (when certain information or event causes the very process that generated it, in a spiral movement) (Senge 2006; Morin 1990).

Faced with mounting cases and increasing congestion rates, investments are directed toward technological solutions while productivity targets are set. This reactive response has led to a marked increase in judges and staff productivity. However, labor charge and annual case filings have not diminished. This reactive way of acting may be not only a consequence of the volume of cases, but also contributes to its exacerbation. Jevons, a British economist, already diagnosed in the 19th century that the increase in efficiency in the use of certain services or products can lead to higher demand (Jevons 1965). Efficient use contributes to increasing consumption.

Linear choices reproduce one of the archetypes (Senge 2006) or traps (Meadows 2008) within complex systems, known as 'fixes that backfire'. A correction applied to a system element, that seems to be effective in the short term, can engender unintended long-term consequences, demanding escalated use of the same remedy. There is a cycle of problem reinforcement, only noticed in the long run. Senge (2006, chap. 4) warns that 'low leverage interventions would be much less alluring if it were not the fact that many actually work, in the short term'. The more judicial decisions, the more cases are finalized, the targets are met, and the corresponding data can be presented for public scrutiny, yielding perception that the solution to all conflicts lays on the judicial system.

Systematically increasing productivity, as a response, as well as expanding the number of judges and staff, or creating some obstacles to the entry of new lawsuits, not only fails to induce a transformative shift in the phenomenon's behavior, but, due to its systemic and complex characteristic, it may even exacerbate the challenge (Ferraz and Münch 2021).

The measures undertaken, while not intrinsically bad, observed in a holistic perception, predominantly constitute low leverage measures, and tend to fuel and perpetuate litigiousness.

4.2. Defuturing

Fry's philosophy of defuturing (Fry 2020), first published in 1999 (Dilnot 2020), has recently become a central theme in the realm of the Systemic Design Association (SDA 2023). It proposes a holistic view of innovation, which must be looked at in its complexity, contemplating not only what it creates, but also what it destroys. Innovation, thus, is not only a process of creation, but also one of destruction (Perera and Fry 2022).

According to Fry, defuturing involves enquiring on the 'bias and direction of what is designed' (Fry 2020). He affirms that whatever has been designed influences our conception and material creation of the future. Therefore, the future is not empty, but already 'colonized' by the past and present (Fry 2020, p. 9). Culture, social practices and structures; knowledge; and all material creations are entwined in what comes next. Although we are not always aware of it, these very creations design. Thus, after being created, our designs also play a role in designing the future, inasmuch as they impact our world, conceptual and material,

leading us through existing paths. Without understanding defuturing, we do not fully comprehend the complexity and extension of our designs' impacts (Fry 2020).

Defuturing is, therefore, an approach to design innovation that calls for a critical reflection upon which futures we might be destroying (*defuturing*). Hence, we should step back to realize that our ideas of the future, including our fictions of progress, are conditioned, and make room to ponder over the path that has taken us to where we stand and which other futures we might be erasing. Defuturing, thus, is looking at design innovation as a complex phenomenon of creation and destruction, which builds one future but destroys others.

A key concept in defuturing philosophy is path dependency, which encompasses 'the dominant structures, cultures and practices within a societal system' (Loorbach 2022). The path that has taken us to where we now stand, through routines, institutions, infrastructure, technology, positions (Loorbach 2022), leads us to preserving the status quo (Feola 2020) and prevents real change. As stated above, our designs continue designing after we create them, reinforcing the futures we have set in motion.

Path dependency leads to the phenomenon of 'innovation trap' (Loorbach 2022), which is a pattern of continuous innovation, usually technological, that only boosts existing systems (Loorbach 2022). Thus, we end up trapped in fictions of progress and production (Fry 2020), where the new is seen in a positive light and the prospective of the future blinds us to what has been defutured.

Defuturing philosophy stresses the narrative behind innovation, reminding that 'our interpretative relation to our world is always partial, culturally framed and linguistically restricted' (Fry 2020, p. 11). From this perspective, it relates to Pavie's concept of 'non-standard innovation' (Pavie 2020), a proposal to counter the prevailing idea that innovation is intrinsically good and desirable, which prevents a critical approach toward it. By the same token, design defuturing provides a framework to contest innovation as an affirmative value (Dilnot 2020).

According to Fry (2020), defuturing is a necessary step before any design. Evidently, it is not possible to fully grasp everything that has been defutured, but it is imperative to question and critically reflect upon the consequences of our designs. Moreover, in doing so, we must be aware of the narratives—and fictions built upon them—that condition our current perspective. Against this backdrop, Perera and Fry (2022) propose a Second-order Design Futuring (SoDF), to explore different narratives and the consequences of design (Perera and Fry 2022).

As a previous step to any design, SoDF enables contra-innovation (Perera and Fry 2022). Contra-innovation is not an alternative innovation, capable of countering an initial project, but rather the exploration of different narratives and consequences of design, of different futures that a design might erase. Hence, SoDF is a systemic approach to design that seeks to skirr different perspectives beyond the beaten paths, emphasizing design consequences and allowing for contestation and fundamental change.

4.3. Litigiousness and the Growing Body of AI Artifacts in the Brazilian Judiciary: Narrative and Defuturing

As seen in Section 4.1 above, the Brazilian Judiciary has traditionally taken a linear approach to tackle litigiousness. Consequently, it has predominantly focused on measures that prioritize productivity and efficiency. Moreover, the growing body of AI artifacts and projects therein is chiefly oriented to increase productivity and efficiency in case processing. It particularly serves mass handling and adjudication. Thus, it can be affirmed that the growing body of AI artifacts and projects in the Brazilian Judiciary mostly adds to the strategy of tackling litigiousness with productivity and efficiency.

Behind such designs, lies a narrative that technological advancements will accelerate case processing, increasing productivity and efficiency: a fiction of progress. Litigiousness, seen as a relentless future, justifies the investments and resources. No other future is conceived. As such, AI represents a technological innovation within the same path dependency,

indicating that the Judiciary might be trapped in a strategy that, so far, has not produced fundamental change. Importantly, this does not mean that AI artifacts must be passed over in a strategy to deal with litigiousness, but rather that their current development and implementation are not taking defuturing into account.

It is necessary to question which possible futures are being erased and how current choices may impact, not only on case processing, but also on the fundamental rights protected by the Judiciary. Although the issue of using AI on decision making is beyond the scope of this article, it is relevant to recall the multiple criticisms related to it, especially, as [Surden \(2019\)](#) states, the “possibility that computer models that learn patterns from data may be subtly biased against certain groups based upon biases embedded in that data”. This type of risks may increase depending on the expectation of increased productivity. An AI artifact is only as good as the programming behind it ([Niiler 2019](#)). As [Fülöp et al. \(2023\)](#) state, “the main difference between human and artificial intelligence lies in people’s own consciousness and the ability to see complex problems in a larger context”. [Mittelstadt et al. \(2016\)](#) present a comprehensive mapping of the ethical debates around algorithms. In a later work, [Floridi et al. \(2021\)](#) offer an ethical framework for a good AI society.

Moreover, as [Contini \(2020\)](#) states, the risk is not hypothetical, so the design and application of AI must be compatible with fundamental rights, and users must be informed actors. The Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment, adopted by the [Council of Europe \(2018\)](#), establishes principles to be followed in this context, such as respect for fundamental rights, user control, transparency, impartiality and fairness. However, the reactive way of dealing with cases focusing on increasing productivity entails greater risks of using AI in ways that may compromise values such as independence, integrity and justice.

[Fry \(2020\)](#) affirms that we do not ‘see’ what our creations design. Computers, he contends, structure and restructure: ‘a being-in-technology whose technology structures the structure of everyday life through its agency as an environment and as directive materialized metaphysics’ ([Fry 2020](#), p. 227). The resulting ‘condition of dependent functionality’ ([Fry 2020](#), p. 227) might cause loss of agency and alienation. This can be transposed to the litigiousness problem in the Brazilian Judiciary.

Data found in the NCJ Review demonstrate that litigiousness in the Brazilian Judiciary has not receded in the past 14 years, notwithstanding continuous measures to increase productivity and efficiency, to which AI artifacts now add. Besides following the same path dependency, however, the technology aggravates the risks of alienation and loss of agency on the part of judges. Clustering and mass handling of cases might distance and alienate judges from the real people behind them. In addition, technology that forecasts outcomes and probability of change in appeals, coupled with pressure for productivity, might give them an incentive to oblige. In such a scenario, judges’ ability to effectively respect and guarantee citizens’ rights might be impaired. This can become particularly unsettling when most Brazilian judges, despite already using some, lack knowledge to control or supervise AI artifacts ([Prado et al. 2022](#)).

4.4. Exploring Defuturing to Design AI Artifacts in the Brazilian Judiciary

The growing body of AI artifacts in the Brazilian Judiciary has mainly added to a linear strategy of dealing with litigiousness. Even though it might be a useful strategy to help tackle that problem, it is not sufficient to implement it alongside the same path dependency that, so far, has not been successful in promoting change. In addition to erasing other (preferable) futures, it carries greater risks of judicial alienation and loss of agency.

Hence, in order to escape the innovation trap, the design of AI artifacts—even those under development or implemented—should follow a systemic approach to consider defuturing. In this respect, Perera and Fry’s SoDF ([Perera and Fry 2022](#)) provides a useful framework to contest innovation, mull over its consequences and consider what is being

defutured. Within this perspective, exploring defuturing should become a mandatory step previous to any design process involving AI artifacts.

Furthermore, considering that there already are AI artifacts in operation, the Judiciary should implement tools to monitor judges for alienation and loss of agency. Additionally, it should heavily invest in judicial education to empower judges to exercise effective control over the artifacts they use.

In the public sector, innovation amounts to the generation of public value (Moore 1995). Interestingly, despite research data revealing that, in relation to the Judiciary, Brazilian society values trust more than celerity or efficiency (Caracas and Münch 2023), institutional policies still focus on productivity. Consequently, further research on the relationship between litigiousness and AI would be welcome, and could include monitoring of the existing artifacts to determine the extent of their impact on case reduction, and public perception.

5. Conclusions

Within an original perspective, the framework of design defuturing philosophy, this article has looked at the growing body of AI artifacts in the Brazilian Judiciary as a judicial policy to tackle litigiousness. As the outcomes of design processes, AI artifacts constitute design innovations. Defuturing design philosophy looks at design innovation as a complex phenomenon that entails both creation—futuring—and destruction—defuturing. Thus, design innovation is intertwined with design defuturing. Even though we are not aware of it, the future is not a blank canvas, but is colonized by the past and present. In the search for fundamental change, it is necessary to identify path dependencies that lead to innovation, often technological, that only adds to the existing systems. For this reason, design processes must consider not only what is being created (futures), but also what is being destroyed, that is, what other futures are being erased (defutures).

Within this perspective, the growing body of AI artifacts in the Brazilian Judiciary has been mainly designed to counter the high level of litigiousness therein, a phenomenon that has been traditionally dealt with in a linear manner, through mechanisms that increase productivity and efficiency. So far, such a strategy has not succeeded. Thus, this article has put forward a necessary debate: expanding productivity and efficiency with AI artifacts within the same path dependency entails risks of judges' alienation and loss of agency, impairing their ability to guarantee and respect citizens' fundamental rights. Moreover, it erases other preferable futures (defutures), preventing real change.

Even though AI artifacts can play a part in tackling litigiousness, there should be a critical reflection upon the path dependency that has led to their design, upon futuring and defuturing. Against this backdrop, this article recommends that SoDF be mandatory for any AI design process. Such a recommendation can be applied to design processes in general, in national or foreign public bodies.

Furthermore, considering that there are AI artifacts already implemented in the Judiciary, this article proposes continuous judicial monitoring for alienation and loss of agency, as well as investments in judicial education to empower judges to effectively control and supervise AI artifacts. This is an essential measure to guarantee that judges can effectively perform their duties, preventing negative impacts on citizens' fundamental rights.

Finally, it suggests further research on this theme, which may include evaluation of levels of litigiousness after the implementation of AI artifacts; public perception and public value generation in the context of AI case processing; and impacts on judicial agency.

Author Contributions: Both authors have contributed equally to the article, in all the aspects considered. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by United Nations Development Programme (UNDP).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data are contained within the article and the references.

Conflicts of Interest: The authors declare no conflict of interest.

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