



# Captured by Digitization

## Algorithms, Law, and Media

Bart Jansen<sup>1,2,3</sup>  · Agnes Schreiner<sup>2</sup>

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### Abstract

While digitization claims to provide efficiency, accessibility, expansion, speediness, and profit accumulation, it is actually colonizing every human activity. It has even become a purpose in itself. In this essay we focus on the digitization of legal practices and contents. We describe what digitization encompasses, how digitalization processes work, and to what extent they are able to replace juristic processes and produce legal outcomes. We are inspired by Walter Benjamin's essay on the influence of mechanical reproduction of the works of Art. Parallel to Benjamin's work on Art, we will analyze Law and the consequences of innovations such as mechanical mass (re)production and computerized digitization.

## 1 Algorithm, Key to Digitization

Not many activities in our daily lives can be imagined without digitization.<sup>1</sup> From the simplest to the most complex operation, it is possible to set up algorithms. An algorithm is a set of rules or instructions that takes you from an initial situation to your desired end [1: xvi]. Take for example an activity like doing laundry. Is there

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<sup>1</sup> We use the terms 'digitization' or 'digitizability' to refer to the transformation of analoge information into digital information and we use the terms 'digitalization' or 'digitalizability' to refer to the the use of digital technology to stimulate governance, society, and business processes.

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✉ Bart Jansen  
b.jansen@nyenrode.nl

<sup>1</sup> Department of Entrepreneurship, Governance & Stewardship, Nyenrode Business University, Breukelen, The Netherlands

<sup>2</sup> Department of Jurisprudence, Faculty of Law, University of Amsterdam, Amsterdam, The Netherlands

<sup>3</sup> Department of Legal Philosophy, Faculty of Law, Airlangga University, Surabaya, Indonesia

dirty laundry, is it sufficient, and sufficiently sorted? Is there enough detergent, is the washing program set, and the washing machine ready? These questions represent possible yes/no answers that program the next action. For instance, waiting for more dirty laundry to arrive, or preparing for a sequential wash, sorting by color or by material, buying detergent, selecting the right program, and switching on the water tap. The algorithm is thus building a yes/no (1/0) selection diagram and the person doing the laundry is not in the picture anymore. Just like the dirty laundry. The activity is zoomed in. The algorithm represents the activity, and only that activity in all its complexity of rules and instructions. What the algorithm visualizes is an isolated action that in turn consists of pieces of action: The gain of digitizability [2: 164].

In the legal profession there are also activities that are determined by step-by-step rules. Each activity can be analyzed as yes/no rules and can be sized into a digital algorithm. The work of a lawyer can therefore be reduced to a series of instructions and displayed as a composite selection diagram. The lawyer's activities thus compartmentalized provide a template to manage an actual action. To give an example of a template filled out by lawyers who are answering the question whether a court decision is exceptional or not, from a civil law perspective they will firstly ask themselves which legal question the judge has answered in the case concerning. The legal question can be analyzed by answering the following sub-questions: what is to be decided in this specific case and does it fall under the regulations of the law? These are questions on a concrete level. On a theoretical level, the following sub-questions had to be answered: Does the law want to regulate cases like this? What do the legal terms of a code, or a statute, mean and how can or should one interpret the letter of the law? To what extent is the ruling in line with the legislation and the intention of the legislator, with previous court judgments, and to what extent is the ruling supported by another legal scholar? These questions answered by 'yes' or 'no' can build an algorithm. Nevertheless, a lawyer is still needed to find these answers. Up until now, a lot of knowledge or many hours at the law library is required from the lawyer. With digitization, however, we have entered a new era; legal sources have been datafied—to a large extent. Twenty years ago, legal skills consisted of searching a library for an appropriate court ruling. Today, lecturers teach their students to search in the right legal database and to use intelligible search terms. The gain is an increased searchability of legal information that has gone above our heads.

## 2 Legal Information Digitalized

Legal search engines are set up in such a way that lawyers with the necessary skills (and with the set algorithms running behind the screen) can follow their trail through the various legal databases. Legislation itself can be searched digitally, as can—whether or not through hyperlinks—the drafting statutory law, and the discussions from the past on the bill in the Parliament and the Senate. Previous court rulings by both national and international judges and the comments on those rulings can also be searched digitally. Furthermore, the law journals form an easily accessible dataset with the help of portals such as LexisNexis. Lawyers who prepare a legal opinion, a plea, will anticipate a possible court judgment and will find answers to similar ques-

tions and rules for their desired end. That is, desired in a legal sense. In accordance with the binary code of law/non-law ( $L/\sim L$ ), the non-law determining factors, such as the number of billable hours, are not considered here [3, 4: 273]. Judges can also follow these same routes if they deem it appropriate in the preparation of a ruling. Finally, it is possible to draw up an algorithm for a court hearing itself, which is largely controlled by procedural law [5: 138]. We will discuss this in more detail later.

### 3 Algorithmic Legal Universe

The yes/no answer program described above has two dimensions. It is certain that the selection diagram that represents the lawyer's research is much more complex than the route following the yes or no answer direction from left to right and from top to bottom within this two-dimensional sphere. One needs to consider that the itineraries can also be traveled in a third dimension of depth; the diagram with the third dimension then forms a deeper interpretation, a large cube: 'yes' + 'no' + 'depth'. If one adds the element of time in which the jurist starts or restarts its work, takes a different path *et cetera*; then this visual can be imagined as series of cubes, which precede, run parallel or diagonally and thus expand in all vectorial directions. This brings us back to the core of an algorithm: it is a collection of steps to achieve a certain goal and therefore it needs enormous amounts of data and technology. These steps thus form an algorithmic structure, which extends far into the universe, but which can be reduced to a nanochip of a few micromillimeters and can be run at a speed faster than the blink of an eye. This structure so far represents an algorithmic legal universe, with the advantage of speed and a new sense of overview—not a tangible overview but a virtual one that has concealed the taken step-by-step paths. So, if the usual paths have been programmed, then that algorithmic structure can be used to detect unusual paths in any dataset. In this way, this specific algorithmic legal universe can be used for the detection of criminal offences. A financial bank can, for instance, trace unusual money transfers in their electronic set of payment transactions [6: 16]. The algorithmic legal universe, however, will not determine whether a bank should do this or not, nor establish the duty to inform the Public Prosecutor's Office.

### 4 Benjamin on Mechanical Reproduction Transponed

The digitalization process reminds us of an earlier technical revolution that arose with the introduction of mechanical reproducibility at the end of the nineteenth century and that was the subject of Walter Benjamin's study *The Work of Art in the Age of Mechanical Reproduction*. In this context, we would like to recap the question that was raised in the Special Issue of the *International Journal for the Semiotics of Law: The Semiotics of Digital Law* [7: 263]. The question was: Can we transplant the thesis of Benjamin on the accessibility of Art through image reproduction, to the accessibility of Law through current digitization; and can we thus reveal the loss and new manifestations that come with the digitalization of the legal world in the same way as Benjamin reveals the loss and new manifestations of the art world?

If one transplants Benjamin's thesis on Art in the age of mechanical reproduction (the decay of its aura and the manifestations of new forms of art [8: 38]) to Law, one firstly must draw conclusions for the Law in that same age, the end of the nineteenth and beginning of the twentieth century. Unlike the ages of representation when Art and Law were relying on ceremonial and ritual practices, they both have no aura in the age of mass production and reproduction. The ceremonial setting required high altars, monumental staircases to celebrate Art and Law, providing aureoles and crowns to affirm their capital 'A' and 'L'. Since they were engaged in the world of production, they had to become functional and instrumental for the accumulation of capital and mass (re)production. The outcome, however, consisted of new manifestations—pictures and movies for art as Benjamin noticed and social engineering by law and sociological jurisprudence for law as we put forward [9]. We will take this comparison even further into the age of digitization, transposing Benjamin's thesis to contemporary law (and art). The use of algorithms seems beneficial, and they have thus been widely discussed in the legal world (and the art world). Algorithms have even become media stars, widely celebrated in news bulletins. What was once characterized by its aura and rites, became modern supported by reproduction, and has now become mediagenic supported by digitization. The algorithm's appeal or power stems from the media, from the screen—and even more as appearance on the screen than as a very tool in real life [10: 105]. In this context, we will investigate the losses and new manifestations of law (and art) caused by digitization.

## 5 Five Cases

Our diagnostic research has focused on mediagenic events of algorithms and law. We confine ourselves to events that came to the fore in the Netherlands. Five phenomena received attention in Dutch news bulletins. We will discuss these five cases briefly in the next sections. Each case will show that the very loss caused by digitization and digitalization exists in the separation of signifiers from the signified, a distinction (*signifiant* and *signifié*) made by Ferdinand de Saussure [11: 99 *et seq.*]. The signifier and the signified lose their referential status [12: 39]. Law (and art) as signified is going to stand alongside, while digitization is booming.

### 5.1 Case 1. Lex Machina: The Lawyer Digitalized

Lex Machina is the frontrunner in the digital renaissance of legal research. Lex Machina was an interdisciplinary project between Stanford Law School and Stanford University's Computer Science Department. The project started within the Intellectual Property Department in 2006 with the aim to make intellectual property disputes and historical patent litigation more transparent. It was mainly developed as a program of Legal Analytics that analyzes collected data to be integrated in decision-making processes. Programmers saw an opportunity to reduce to an algorithm the steps that a particular lawyer follows through the databases. What is the outcome of this Legal Analytics? No new legal content is in fact created. While new legal content is constantly being integrated into the legal machine, it is not the outcome, but only

the human input. The result, however, is a program that promises matter forecasting and legal strategy: a competitive advantage over those who do not use it. By using an algorithm like this as a search query, the institution or company that employs lawyers can examine the entire dataset of computer behavior of the track seekers, offering the partners of a law firm a view of which employee is doing the best job [13: 256]. This type of analysis service can be used in all legal areas; it is even being used as an accurate prediction of case costs and thereby as evaluation of various case strategies.

Notwithstanding its name, *Lex Machina*, the program still highlights the necessity of human reviewers. [14: 8]. Just as Learning Analytics track and screen the learning processes of students who are using the computer for their studies, Legal Analytics provide indicators of a successful legal strategy [15: 4]. However, the learning strategy discovered with Learning Analytics does not determine whether the student has acquired knowledge. In the same way, Legal Analytics provide insight into a litigation strategy to be followed but is not in itself a decision to litigate. Whatever the analysis, the program does not create new content. Except if one suggests that the strategy itself is the content: the strategy of the strategy. Our reasoning is thus in line with Jean Baudrillard, who would have called this an ironic but ‘fatal strategy’ [10: 101]. Digitalization as signifier moves away from the legal outcome that clings to the signified, without an original, dialectical connection with the digitized content.

## 5.2 Case 2. Ravel Law: The Judge Digitalized

In the age of digitization, we find not only a digitalized lawyer, but also a digitalized judge. Namely, a database of court decisions can be searched in the ways that the courts have chosen and thus with algorithms. Techniques applied to legal texts, *i.e.*, text mining, can help unravel hidden links within existing data [16: 279]. In this manner, it can be determined, for instance, which argument is most decisive for which type of judge. There is a data analysis program like *Lex Machina*, purchased by LexisNexis, which unravels the judicial judgement in this way and that—apparently without irony—calls itself Ravel Law [17: S10-11].

For a common-law system, on the one hand, where the law is formed by judicial decisions and precedent is elevated to case law, the analysis of judicial decisions is a necessity [18: 95]. The computer program Ravel Law is therefore welcome, but it goes against the old adage “good lawyers know their case” (signifier refers to signified), in favor of the new adage “great lawyers know their judge” (signifier meets signifier). For civil law systems, on the other hand, the unravelling of judges can be seen as a violation of the council chamber’s secrecy. This is the case in France, where the unravelling of judges has recently been forbidden [19] after the algorithm showed that some judges in asylum cases almost always said “No”, and other judges mainly said “Yes”. The consequent new Article 33 of France’s Justice Reform Act is intended to prevent anyone from publicly disclosing the pattern of judges’ behavior with respect to court decisions, stating five years of imprisonment as possible punishment.<sup>2</sup>

<sup>2</sup> Article 33 LOI n° 2019–222 du 23 mars 2019 de programmation 2018–2022 et de réforme pour la justice (1).

### 5.3 Case 3. E-Court: The Litigation Digitalized

The website of the e-Court Foundation [20] presents itself as a digital independent and impartial court, offering digital arbitration or binding advice (as regulated in Article 1020 *et seq.* of the Dutch Code of Civil Procedure and in Article 7:900 *et seq.* of the Dutch Civil Code). The underlying thought is that litigation can be digitalized and proceeded online. Since the party that is ruled against must pay the costs of the proceedings, it is important for the e-Court that the costs remain as low as possible. The foundation even goes as far as believing that cost reduction is a matter of consumer protection.

However, the main objection against this e-Court is that it misleads citizens by calling itself ‘court’ referring to the ‘real’ court (signified), seen by the litigants as ‘judge’ expecting a judicial decision (signified), while it actually simply is an online alternative (signifier) to formal dispute resolution (signified). At the same time online dispute resolution (ODR)—the provision of forms of ADR, *i.c.* arbitration and binding advice, by digital means—had been a buzzword for some time [21: 891]. The many questions raised against the e-Court reveal that its decision-making is shrouded in an atmosphere of secrecy; as Frits Bakker, the chairman of the Dutch Council of the Judiciary (*Raad voor de Rechtspraak*), commented on the e-Court: “I think it is also a bit of a black hole how your case is handled” [22: 03’56’]. It seems as if the e-Court has taken over the oracle-like nature of traditional law [23: 69] but what appears to be oracular is merely a renewed strategy.

Because of the denigration by the established court system, e-Court lost its share in the private litigation market. The suspicion arose that e-Court was being conspired against by the actual judges [24–27] and the e-Court Foundation started the tort case against the Council for the Judiciary (*e-Court vs. the State*, 2018) [20–25, 28]. In an out of court settlement reached between the two parties, the Council of the Judiciary admitted that e-Court’s knowledge and practical experience can be useful in the digitalization of the regular courts.

The fact that e-Court, nevertheless, works digitally and is embedded in the law is not the same as a digitalized court. Going online as a decision maker (signifier) is not the same as a digitalized ruling (signified). At the end, it is still the e-Court decision maker who decides the outcome on their own and not an electronic machine, *i.e.*, again no *lex ex machina*.

### 5.4 Case 4. KEI Legislation: The Courts Digitized

Having examined the possibility of a digitalized lawyer, a digitalized judge, and a digitalized litigation as they appeared in Dutch media; we will now explore the newsfeed on the digitalized court. Many researchers consider the digitization of legal proceedings possible and even inevitable [29, 30]. In the Netherlands, the innovation of court through digitization was supported by the KEI legislation (*Kwaliteit En Innovatie*, Quality and Innovation). The 2016 Act Amending the Code of Civil Procedure and the General Administrative Law Act in connection with the simplification and digitization of procedural law implemented the Quality and Innovation project of the Council for the Judiciary. In practice and over time, however, it seemed to fail and on

October 1st, 2019, a Dutch Act came into force that obliged the so-called digital pilot courts to stop their legal proceedings. After three years of testing and experimenting, everything had to be written on paper and stacked again, like all the other courts according to the rules of civil procedure. Nowadays, one of the courts still adhering to digital litigation is the Dutch Supreme Court [31].

However, the Dutch Council for the Judiciary did not give up and found support for a Basic Plan, which, firstly, provides the putting of procedural documents into a digital file—a unique file that the litigating parties can consult, amend, and supplement. In this way, the accessibility for the person seeking justice is digitally guaranteed. The Basic Plan, secondly, states that a procedure at an ordinary civil court can be broken down into an algorithm. It starts with the creation of, in its own words, “manageable steps per case flow” to which a work file for the judge can be linked [32: 2]. Does the Council for the Judiciary realize that the digitization must fail? That one cannot put this algorithm that represents the litigation process and has its own dynamic, in the dossier file that needs its own course of development? In law, both procedure and file are still connected as signifier (form) and signified (substance). When both are being digitized, they experience an exponential growth in their own direction, which means that they no longer come together. If a digitized form and a digitized substance must be put together, they can no longer undergo their own digital development. The moment a file is adopted in the procedure, the file has to come to a halt, and the seekers of Justice are then sidetracked. And on the other side, when a procedure is adopted in a file, the procedure cannot jump to its next step. It has to still down. This means the end of digitization. Therefore, the Council for the Judiciary is condemned to sustain the analogue connection of form and substance.

### 5.5 Case 5. Remote Justice

Due to the COVID-19 regulation and to severe lockdown, Dutch courts had to undergo a quick change. To reduce the growing caseload, the justice system was forced to upgrade their technologies by using smart phones and tablets for video calls, streaming technics, and digital settings for virtual conferencing [33]. As for many Dutch institutions and organizations, the most applied tool for access to online and hybrid meetings turned out to be Zoom. Suddenly, faces of administrators, moderators, clients, patients, social workers, students, teachers, and experts appeared everywhere, each surrounded by their own environments—side by side in the Zoom gallery view. Expressions such as “you have to unmute yourself” became routine. The same became true for judges, lawyers, and other people handling cases. As an aside, it coincides with zooming researchers and students who were given the opportunity to observe and record digital hearings or to interview the protagonist of the online hearings and to record these interview meetings. Their research is at the moment of our contribution not published yet [34]. Through conference talks and a master thesis however, research reveals that some judges and lawyers felt unrecognized in their role in this new setting [35, 36], others felt that their contact and communication with the juvenal litigants improved thanks to the new digital setting. These juvenile litigants had become, as we analyse it, one of the many *pure signs* on the screen and,

as such, they are thus even no longer signifiers (since the term ‘signifier’ still refers to the signified).

By choosing to wear robes and by positioning themselves at the desk of their law office or in their chair at the courtroom, these judges are choosing for the return of an aura, but it is a virtual aura. This virtual aura has nothing to do with a ceremonial setting, but everything with the circulation as a sign among pure signs.

## 5.6 Conclusion: What Digitalization Does

The five mediagenic events hereabove show that digitalization is thriving, accumulating one digitization on the other. In doing so, digitalization takes its own course, leaving the legal world—*i.e.* the legal content, the judicial argument, the ruling, the legal procedure, the judge, and the lawyer—behind. The position of the legal world can be compared to that of a famous artwork hanging on the wall of an even more famous museum. The museum had to rebuild its entrance to receive the consequential loads of tourists. The visitors are crowding in front of the Mona Lisa, taking selfies; but the Mona Lisa is still the old Mona Lisa from another time. She must tolerate the masses who turn their back to her for the perfect picture and leave the room with their digital snapshots. In a similar manner, the legal world still has its courtrooms and its legal outcomes, but it must endure the fact that digitalization is not affected by the law and that its digitized courtrooms and legal outcomes circulates as digits among all digits.

## 6 Captured by Digitization

In the previous sections, we concluded with Benjamin that at the end of the nineteenth century the aura of art and law had vanished. Furthermore, we emphasized the lost and solitary position of the signified and discussed the fatal consequences of contemporary digitization. The Mona Lisa is back faced in the age of the smartphone. And law? Justice is virtually back faced by Zoom.

Benjamin’s work on mechanical reproduction instigates us to analyze more than the lost and solitary position of the signified. He also observed that mechanical reproduction captured a place of its own among artistic processes such as pictures and movies [8: 11].<sup>3</sup> For law, the outcome then consisted of a functional type of law that could organize society and that grounded sociological jurisprudence. In order to see if digitization captures a place of its own among the juristic processes, we had searched for and detected contemporary legal instruments. We, firstly, discuss smart contracts, then GDPR certificates, and finally NFTs.

<sup>3</sup> Walter Benjamin, *Das Kunstwerk* [8: 11]: “Um neunzehnhundert hatte die technische Reproduktion einen Standard erreicht, auf dem sie nicht nur die Gesamtheit der überkommenen Kunstwerke zu ihrem Objekt zu machen und deren Wirkung den tiefsten Veränderungen zu unterwerfen begann, sondern sich einen eigenen Platz unter den künstlerischen Verfahrungsweise eroberte.” [“Around 1900 technical reproduction had reached a standard that not only permitted it to reproduce all transmitted works of art and thus to cause the most profound change in their impact upon the public; it also had captured a place of its own among the artistic processes.”].



## 6.1 Smart Contracts

In the real world, law regulates in a sense every daily behavior. For instance, each potential relationship is considered a contract, an exchange with a particular end, like a purchase contract, a labor contract, and a marriage contract. The terms and conditions of such a contract can be reduced to simple 1/0 decisions. This is where a contract enters the digital world. A contract adapted into the digital world, is named a ‘smart contract’, and exists of just self-enforceable and self-executable terms and conditions [37: 337–340]. In the virtual world of digitization, where every activity with an end is reduced to an algorithm, blockchains are the building blocks for complex and interconnected activities. A good marriage between a smart contract and blockchain technology is then a fact.

## 6.2 GDPR Certificates

According to the private law system, the next subject after ‘contract’ is, of course, ‘tort’. (Property, the third and last subject, will come next.) The EU legislator came with the General Data Protection Regulation (GDPR) in order to hold the controllers who hire processors to analyze data and to program, responsible for transparency and for data protecting, particularly personal data. The controllers can only deny their liability if the data processors, to whom they entrust processing operations, provide sufficient guarantees.<sup>4</sup> The data processors who are creating blockchains, use recognizable characters such as hashtags for the controllability between these different data units [38]. The law, almost synonym with control, provides instruments that can be integrated, “allowing data subjects to quickly assess the level of data protection of relevant products and services”. Hashtag tokens are being topped by juristic tokens like seals and marks, and certificates of the GDPR. As the EU Regulation says:

In order to enhance transparency and compliance with this regulation, the establishment of *certification mechanisms and data protection seals and marks* [emphasis added] should be encouraged, allowing data subjects to quickly assess the level of data protection of relevant products and services.<sup>5</sup>

Since it is an EU Regulation and not an EU Directive, the EU Member State legislators are obliged to apply these juristic tokens, as provided by Article 42 of the GDPR. Being obliged is even more suitable, according to some, since EU Member State legislators would otherwise consider national legal cultures, while the mechanical 1/0 rules are not affected [39: 140–151].

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<sup>4</sup> Regulation (EU) 2016/679, r. 81.

<sup>5</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), r. 100.

### 6.3 NFT, Key to Mint Digital Art

Until recently, digital artists were not able to make money out of their creations since their digital painting, sculpture, photo, or hologram could circulate the whole world and be seen on every device. They could not profit from their property. NFT technology recently came to the rescue. NFT stands for ‘Non-Fungible Token’, it is a small computer program that runs somewhere in a blockchain. The program consists of a number of codes that can link a work of art that is being purchased to a personal digital wallet of the purchaser. In this manner, the authenticity is consolidated in a unique set of code characters [40: 631]. In other words, the NFT in the blockchain reflects the ownership. Artist Kenny Schachter: “[An NFT] is a digital certificate of authenticity, [that] sits on a smart contract which piggybacks on an Ethereum cryptocurrency” [41: 02’47”]. The blockchain is therefore not only being used for the transfer of digital money like Ethereum but it can also be used to proof and to transfer ownership of a particular digital asset. The art world embraced this technology and its potential through digital markets, NFT platforms, and virtual auctions. Art Basel Miami Beach suddenly became overwhelmed by a new generation of art sellers and buyers; and NFT-ism became a media hype. Digital artists and collectors filled their wallets with cryptocurrency. One interesting aspect to this new tool was that artists received a commission on every future sale of their NFT thanks to an even smaller computer program that automatically pays out the commission to the creator and fee to the miners. These aspects, that are normally negotiated through lawyers and contracts in the boardroom, are reduced to a simple ‘smart contract’—a blockchain or data unit—in the digital universe known as the Metaverse [41: 24, 42: 185]. When the terms are fulfilled, the smart contract automatically executes.

The Metaverse consists of codes. When you enter a platform like OpenSea or Rarible you have the illusion of buying art, but when you click on an asset you only acquire a small set of bits, described as “these incredibly ugly NFTs” by Dutch digital artist Harm van den Dorpel [43: 22’00”]. The digital artwork itself is not in your hands. It can easily circulate everywhere on the internet, and it can even be wiped out when the concerned servers go down. What rests is your virtual wallet.

Applied in the art market, NFT technology proofs its effectiveness. It can also be used in every juristic process. Each authentication can be programmed, from transferring properties, patents, and securities to paying rent, taxes, tort claims, and fines. That is, only if creditor and debtor have access to their individual digital wallet and know their password. Digitization namely only produces digits after digits, creating Metaverse after Metaverse. It builds its own ‘Pataphysical Universe (for which Doctor Faustroll invented the “science of imaginary solutions” [44: 16]). Therefore, one may call the Metaverse a real ‘Pataverse.

### 6.4 Conclusion: Digital Capturing

Benjamin had, in a way, welcomed pictures and movies as to be qualified as new art works. For him and for the era that he represented, the political function of these art forms was evident. The era of digitalization that we have inquired and analyzed, is not simply an extension of the era of mechanical reproduction, since we indicate

the very vanishment of functional alliances. Smart contracts, GDPR certificates, and NFTs can be qualified as new legal instruments, but they lack actual functional intervention power or instrumental power control. It is comparable to the lack of power or control over the NFT art work for the art collector. The new legal instruments and the new NFT art works have entered the sphere of the floating signifier [45: 150].

## 7 Deus Ex Machina

On February 1st, 2020, Google Maps lost in favor of art. Google reported a traffic jam in the center of Berlin that in reality did not exist. As *deus ex machina*, artist Simon Weckert showed how easily the digital world can be manipulated [46]. Weckert collected 99 used smartphones, equipped them with SIM cards and internet access, and placed the devices in a small red handcart. He then walked slowly with this handcart through some of Berlin's deserted streets. The actuality and perception of physical streets is simulated by Google Maps. Weckert and his collection thus caused a virtual traffic jam on Google Maps. Google Maps was at a loss [47: E3]. With this work of art, *Google Maps Hack*, the artist showed the hoax of Google's famous algorithms. This *deus ex machina* shows that algorithms on their own does not guarantee real content. Even more, that a *lex ex machina* does not exist.

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