

# “A QUE SERÁ QUE SE DESTINA?” “WHAT IS IT MEANT FOR?” PERSPECTIVES ON ARTIFICIAL INTELLIGENCE IN CONTEMPORARY CRIMINAL LAW (\*)

by Michele Papa

SOMMARIO: 1. Technological Revolutions and Normative Order. – 2. Yesterday’s Tomorrows. – 3. Scenarios. – 4. Our Focus. – 5. Changes in Symbolic Codes: the Transition from Text-Driven Law to Code-Driven Law. – 5.1. Consequent Changes in the Processes of Applying and Interpreting Law. – 6. Changes in Normative Style: Crisis and Renewal of the Offense Definition. – 6.1. The Crisis of Traditional Offense Definitions. – 6.1.1. The Growing Difficulty of “Ordering the World According to the Appearance of Things”. – 6.1.2. The Progressive Dematerialization of Socially Significant Reality. – 6.1.3. The Necessary Proceduralization of the Balancing of Conflicting Interests. – 6.2. Can Artificial Intelligence Renew the Formulation of Offense Definitions? – 6.3. “Narrative Scripts” as an Alternative to Traditional Offense Definitions. – 6.4. Conceiving and Describing the Face of Crimes: a Challenge Addressed Only to Human Imagination? – 7. Changes in the Medium (Vehicle, Support, Carrier) of the Normative Message. – 7.1. From the Model of the Criminal Code to Networked Normative Structures. – 7.2. The Metamorphosis of the Medium: from Written Language to Multimedia. – 8. Conclusion.

---

(\*) This is the English version, expanded and supplemented with essential footnotes, of the paper presented at the Symposium *Direito, Tecnologia & Sociedade*, held in São Paulo, Brazil, from 10 to 13 November 2025. The opening words of the title, retained here in Portuguese, echo a line from *Cajuína*, the celebrated song by Caetano Veloso.

For the principal bibliographical references, and for a broader treatment of some of the issues addressed here, I refer to several of my works published in recent years, beginning with M. PAPA, *Fantastic Voyage. Attraverso la specialità del diritto penale*, 2nd ed., Turin, 2019. See subsequently: ID., *La fattispecie come sceneggiatura dell’ingiusto. Ascesi e crisi del diritto penale cinematografico*, in *Criminalia*, 2019, 2020, p. 181 ff.; ID., *The Offense Definition as a Screenplay of Evil: The Rise and Fall of Visual Criminal Law*, in *Católica Law Review*, 2020, 4, 3, p. 145 ff.; ID., *Appearance in Criminal Law. Illusion and Reality in the Description of Evil*, in *Aparenta in Drept. In Honorem Flavius Antoniu Baias*, Bucharest, 2021, p. 682 ff.; ID., *La créativité imaginante du droit pénal*, in *Cheminer avec Mireille Delmas-Marty. Mélanges ouverts en l’honneur de Mireille Delmas-Marty*, Le Kremlin-Bicêtre, 2022, p. 83 ff.; ID., ‘Speciale’, in *Studi in onore di Carlo Enrico Paliero*, ed. by C. PIERGALLINI, G. MANNOZZI, C. SOTIS, C. PERINI, M.M. SCOLETTA, F. CONSULICH, vol. III, Milan, 2022, p. 1885 ff.; ID., *La définition de l’infraction comme ‘forme symbolique’*, in *L’Irascibile*, 2022, p. 259 ff.; ID., [La forza immaginante del diritto penale](#), in *this Journal*, February 14, 2025; ID., *La fattispecie come forma simbolica*, in *Criminalia* 2024, 2025, p. 113 ff. With particular regard to the specific issue of new technologies, see: ID., *Future crimes. Intelligenza artificiale e rinnovamento del diritto penale*, in *Criminalia* 2019, 2020, p. 181 ff.; ID., G. TAVELLA, *Intelligenza artificiale e legislazione penale*, in *Cybercrime*, ed. by A. CADOPPI, S. CANESTRARI, A. MANNA, M. PAPA, 2nd ed., Milan, 2023; M. PAPA, *Nuove tecnologie e “accesso alla giustizia” per le persone vulnerabili*, in *Tutela penale delle persone vulnerabili*, ed. by A. CADOPPI, S. CANESTRARI, C. CONTI, A. MANNA, M. PAPA, Milan, 2026, where some of the reflections taken up and further reworked here have already been developed.

## 1. Technological Revolutions and Normative Order.

Every technological revolution disrupts the forms and languages of normativity. Writing, printing, digitalization, and artificial intelligence do not merely accelerate the processing and transmission of information: they reconfigure the symbolic infrastructure through which a community imagines, articulates, and legitimizes its normative order. When technology changes, the deontological architecture of society changes with it<sup>1</sup>.

The extraordinary speed of technological innovation nurtures a widespread conviction: we are at the beginning of an entirely new historical age. Consider smartphones: in less than two decades, they have completely transformed everyone's life — private, social, economic, and political. When change unfolds so rapidly and so deeply, the belief takes hold that one world has suddenly aged and disappeared while another is being born before our eyes.

Jurists, too, participate emotionally in both the enthusiasm and the anxieties of this new dawn. Many are engaged in the effort to understand, anticipate, and govern the consequences of the imminent — and impending — technological future. Everywhere one hears talk of artificial intelligence, algorithms, big-data analysis, predictions of criminal recidivism, and robot judges capable of replacing human beings in deciding cases. Artificial intelligence occupies center stage with its magnetic and unsettling presence, pushing to the margins of attention other forms of “new knowledge” that had themselves entered the scene only very recently: neuroscience, nanotechnology, forensic genetics, forensic entomology, investigative zoology — with new-generation animal detectives, such as so-called molecular dogs — and so on.

## 2. Yesterday's Tomorrows.

It is not easy to understand how far this growing futuristic curiosity is accompanied by a reliable awareness of the historical moment in which we find ourselves. *A que será que se destinam?* What are we destined for? Who can possibly know? Even assuming that history unfolds in cycles, how can we establish whether we are at the beginning of an age or at its end?

I still remember another moment that seemed destined to mark the beginning of a “great leap forward.” I experienced it in the 1960s. New scientific and technological horizons appeared to be transforming everyday life within just a few years. Homes filled with washing machines, televisions, blenders, and vacuum cleaners. Plastic objects promised a lighter and more flexible world. Bottles and glasses could fall without breaking. Humanity seemed launched toward the conquest of space. In that atmosphere,

---

<sup>1</sup> In particularly effective terms, see A. GARAPON, J. LASSÈGUE, *Justice digitale. Révolution graphique et rupture anthropologique*, Paris, 2018, p. 12 ff. On the profound reconfiguration of the moral and deontological order brought about by the transition from orality to a cultural paradigm based on writing, see E. HAVELOCK, *Dike. La nascita della coscienza* (1978), Italian trans., Bari, 1981.

how could one doubt that a future of diligent robots, flying cars, death rays, and interstellar travel was already at the door?

Those were prophecies of a future glimpsed but never arrived: fantasies destined for the great museum of “proto-futures,” where all the imagined futures that never came to pass are kept<sup>2</sup>. They were the 1960s: we were not at the beginning of a new cycle, but at the end of the previous one. Those particular expectations of the future were followed by something completely different and entirely unforeseen: not journeys to Mars, but mass tourism; not flying cars, but electric bicycles. In the science fiction of those years, typewriters still sat on the desks of spaceships. And yet those tools were about to disappear, replaced by the true protagonist of the next era: the personal computer. The world we inhabit today begins there.

We may therefore renew a timeless question: where are we going? Where are new technologies — and artificial intelligence in particular — taking criminal law?

### 3. Scenarios.

As has been well summarized in an essay published a few years ago, the criminal-law implications of artificial intelligence are developing along several principal lines<sup>3</sup>. They concern:

- a) law-enforcement practices, in particular so-called “predictive policing”;
- b) the use of decision-making algorithms in criminal adjudication, with the possible total or partial replacement of the human judge by the so-called “robot judge”;
- c) the assessment of criminal risk through predictive systems capable of processing enormous quantities of data in order to identify patterns, correlations, and behavioral indicators, thereby enabling profiling and the prediction of future conduct, including conduct relevant to criminal law;
- d) finally, the involvement of AI systems as instruments, perpetrators, or even victims of crime.

For a fuller discussion of these themes, I refer to the vast bibliography that has developed in recent years<sup>4</sup>.

---

<sup>2</sup> Proto-future — or retro-future — refers to the representation of the future as seen from the past. In English, the expression “yesterday’s tomorrows” is often used: literally. The subject is highly interesting from many perspectives, especially if one considers the visual arts, through which these visions of tomorrow take morphological shape. See: J. CORN, B. HERRIGAN, *Yesterday’s Tomorrows. Past Visions of the American Future*, Baltimore and London, 1984, available at archive.org; G. MORRISON, T. DE HAVEN, R. CHANDLER, J. FREEMAN, C. REYNOLDS, R. HUGHES, *Yesterday’s Tomorrows*, London, 2007.

<sup>3</sup> F. BASILE, *Intelligenza artificiale e diritto penale. Quattro possibili percorsi di indagine*, in *Diritto Penale e Uomo – DPU*, September 29, 2019.

<sup>4</sup> With reference to authors writing in Italian, B. FRAGASSO, *Intelligenza artificiale e responsabilità penale*, Turin, 2025, and A. GIANNINI, *Criminal Behavior and Accountability of Artificial Intelligence Systems*, The Hague, 2023. See also G. BALBI, F. DE SIMONE, A. ESPOSITO, S. MANACORDA (eds.), *Diritto penale e intelligenza artificiale*, Turin, 2022; F. BASILE, M. BIASI, L. B. C. CAMALDO, G. CANESCHI, B. FRAGASSO, D. MILANI (eds.), *Intelligenza artificiale. Diritto, giustizia, economia ed etica*, Turin, 2025; G. BARONE, *Giustizia predittiva e certezza del diritto*, Milan, 2024; A. DE CARO, V. MAFFEO, G. ROSSI (eds.), *Il processo penale alla prova delle nuove tecnologie e dell’intelligenza*

With respect to the four issues just distinguished, I would like here to follow a different path, focusing on further perspectives of inquiry. Although partly connected with the questions just mentioned, they open autonomous lines of reflection on the impact that digital technologies, and the related forms of artificial intelligence, are producing — and will produce — on criminal law.

#### 4. Our Focus.

Our analysis begins from the premise with which we opened: new technologies do not affect only the ways in which law is applied; they also reshape normativity and therefore the very face of legal norms. This transformation is now unfolding with the advance of digitalization and becomes more pronounced as computational technologies grow more sophisticated, with artificial intelligence representing their most striking expression. Digitalization and AI technologies influence the ways in which norms are conceived, represented, and communicated.

The transformation of contemporary criminal legislation consequently develops along several closely interconnected evolutionary lines. Let us distinguish three:

A) The first concerns the symbolic code through which norms are formulated: natural language, technical-legal language, or computational and informatic codes.

B) The second concerns normative style, that is, the particular functional prose through which criminal prohibitions are formulated. We intend to dwell on the expressive modes used by the legislator in writing criminal norms. These themes, as we shall see, do not entirely coincide with those traditionally addressed under the heading of “legislative technique.” The issue is not only, or not merely, choosing the words of the law correctly or writing clearly. The perspective that interests us is much more radical: what are the literary genres, the possible expressive forms, to which the legislator may resort?

C) The third concerns the medium that carries the normative message. By the term medium we refer to the material support — here the English term “carrier” is also useful — that incorporates norms and conveys or communicates them: voice, gesture, printed text, digital data, audiovisual representation, electronic data, immersive virtual environments. In the course of this essay we shall use, as synonyms, the various terms just indicated: medium, support, vehicle, vector, and, borrowing from other contexts as well, the English term “carrier.”

We believe that the distinction among questions concerning, respectively, the symbolic code, normative style, and the medium or support that incorporates and conveys the normative message is analytically useful. Of course, one must always bear

---

*artificiale*, Turin, 2026; L. PICOTTI, [Categorie tradizionali del diritto penale e intelligenza artificiale: crisi o palinogenesi?](#), in *this Journal*, July 31, 2024; L. ROMANÒ, *La responsabilità penale al tempo di ChatGPT: prospettive de iure condendo in tema di gestione del rischio da intelligenza artificiale generativa*, *ibid.*, May 17, 2023. See also for a wider literature review P. SARKKI, F. TOMAS, M. ANTHEUNIS, *Artificial intelligence in the criminal justice system: Systematic literature review and research agenda*, in *AI and Ethics*, 2024, 4(2), pp. 1–19.

in mind that the three dimensions interact and sometimes overlap. Changes in the medium — that is, in the type of support that incorporates and communicates legal norms — tend, for example, to influence the formulation and style through which those norms are expressed. Law carved in stone tends to be “lapidary” — a term that derives precisely from lapis, the Latin word for stone. Likewise, a law conveyed through audiovisual means will hardly retain the expressive form of norms written for the printed page. When the vehicle, the material support of the norm, changes, the form and style of normativity change with it.

Keeping all this in mind, let us now examine more closely the three dimensions of this transformation: first, the changes in the symbolic codes through which norms are expressed; then the changes in the normative styles through which the criminal prohibition takes shape and is communicated; and finally the changes concerning the medium, the support that incorporates, carries, and communicates norms.

## 5. Changes in Symbolic Codes: the Transition from Text-Driven Law to Code-Driven Law.

The first perspective of inquiry concerns, as we said, the symbolic code used to formulate prohibitions and commands backed by criminal sanctions. Natural language, through which criminal norms have taken shape for centuries, is today entering into competition with new symbolic codes, especially those developed to be used directly by computer programs and artificial-intelligence systems. We are witnessing — for now above all in areas other than criminal law — the transition from law based on text and expressed in natural language, or text-driven law, to digital law formulated through highly formalized languages, or code-driven law, and, as it is often said, machine-consumable law. In this regard one speaks of “Rules as Code,” where the term “code” obviously indicates computer code, computable information, and not — as in the ordinary legal usage of the word — the traditional organizational form of legislation, such as a criminal or civil code<sup>5</sup>.

In text-based law, legal norms are formulated through extensive use of natural language, with the legislator addressing primarily human cognition and interpretation. As shown by the descriptions of traditional crimes such as theft, robbery, personal

---

<sup>5</sup> The relevant literature is often, understandably, marked by technical specialization and formulaic approaches. As an introductory reading, I suggest the OECD working paper by J. MOHUN, A. ROBERTS, *Cracking the Code: Rulemaking for Humans and Machines*, 2020; and then E. MICHELER, A. WHALEY, *Regulatory Technology: Replacing Law with Computer Code*, in *European Business Organization Law Review*, 21, 2020, pp. 349–377; M. W. WONG, *Rules as Code: Seven Levels of Digitisation*, 2020; M. WADDINGTON, *Rules as Code*, in *Law in Context*, 37, 1, 2020.

Also very useful is the *Blog Symposium on “Rules as Code”*, hosted by the *Law School Public Policy Review*, where various relevant issues are addressed in dialogical form and through video materials. See also the section written by GIULIA TAVELLA in the essay *Intelligenza artificiale e legislazione penale*, cited in the opening note.

injury, or sexual violence, normative language is characterized by constant references to aspects of the sensible world and to experiential phenomena. The effectiveness of such language depends, as we know, on understanding, argumentation, and contextual evaluation of concrete cases.

In the second model, that of code-driven law, norms are instead formulated in computational languages capable of being understood and processed directly by digital systems. One may think of the software and “applications” used to manage legally regulated activities — such as copyright, road traffic, employees’ social-security contributions, or tax returns — or of tools that, through chatbots or artificial-intelligence systems, provide information on the rules in force in particular sectors. Such programs and applications are not able to operate by using law expressed in natural language as a human interpreter would; rather, they “consume” code-driven law. Conditions must therefore be created so that such computer systems understand what laws are talking about.

At present, code-driven law is formed above all through a process of translation: norms originally formulated as text-driven law are “converted” into computational language. There are, however, as we shall immediately reiterate, legal systems that are experimenting with the original production of code-driven legislation.

At first sight, the formulation of law as code would seem to concern only the linguistic modalities through which norms are drafted, without altering their substantive content. One might think that law remains what it is; only its language changes. The very practice of “translation” just mentioned would appear to support this view, confirming that language is an independent variable that has little effect on normative content.

In reality, matters are not quite so. The formal precision required by computable systems inevitably conditions the content of norms. When norms are formulated through flexible concepts that require evaluative judgments and critical choices, they cannot be transferred directly into the computational world. They must be reformulated so as to reach levels of clarity and precision below which computer code cannot operate. This operation is not always possible. And in any event it is certainly not merely technical: it implies choices by the “translators” that inevitably affect content. Moreover, translation is generally entrusted to engineers and computer specialists. They lack not only the democratic legitimacy required to make normative choices, but often also a solid legal education. As a result, decisions of considerable importance may arise from creative choices, or from choices otherwise misaligned with those of the legislator<sup>6</sup>. In

---

<sup>6</sup> L. B. CRAWFORD, *Rules as code and the rule of law*, in *Public Law*, 3, 2023, p. 402, in SSRN: <https://ssrn.com/abstract=5184244> or <http://dx.doi.org/10.2139/ssrn.5184244>; A. HUGGINS, A. WITT, M. BURDON, *Digital distortions and interpretive choices: A cartographic perspective on encoding regulation*, in *Computer Law & Security Review*, 2024, p. 52, <https://www.sciencedirect.com/science/article/pii/S026736492300105X>; A. WITT, A. HUGGINS, G. GOVERNATORI, J. BICKLEY, *Encoding legislation: a methodology for enhancing technical validation, legal alignment and interdisciplinarity*, in *Artificial Intelligence and Law*, 2024, pp. 32, 293, <https://link.springer.com/article/10.1007/s10506-023-09350-1>.

truth, when norms are originally formulated in terms that are “too human,” it would be better to give up any translation for machines.

Faced with this situation, the legislators of some countries have attempted to take back control of the entire process by beginning to produce computable norms *ab origine*<sup>7</sup>. This allows tighter control over normative production, limiting the creative discretion of intermediate translators. It is a very interesting perspective — and a necessary one from the standpoint of the principle of legality — but it is full of risks. Chief among them is the risk of having to modify radically the process by which norms are conceived, formulated, and communicated, flattening legislation onto the needs of machines and eclipsing the centrality of the human being. If we humans are not even able to read the barcodes on supermarket products, how could we orient ourselves in a world in which all official normativity were expressed in directly computational terms? It is therefore necessary to proceed through “bilingualism,” always maintaining both expressive modalities: one for humans and one for machines. Yet it is not easy to conceive a legal norm without using a particular linguistic code as the “primary” code. The consequence is that this code will always dominate the other one, the code imposed by bilingualism. The possibility is frightening that the primary code might become the computational one and that the second version, expressed in human language, might be no more than a courtesy translation — one might say, a politically correct translation — for the benefit of intelligences, our own, that are “differently abled.” At bottom, there remains the awareness that even the best translations suffer from a physiological limit: the translated text always says “almost the same thing” as the original, never “truly the same thing.”<sup>8</sup>

Moreover, in criminal law, code-driven legislation appears particularly problematic. One need only leaf through the special part of any criminal code: offense definitions are formulated through constant references to data drawn from sensible reality, to experiential and psychological phenomena; they often use notions whose definition presupposes critical and evaluative capacities — for example, “violence,” “threat,” “unjust profit,” “taking advantage,” “inducement,” “sexual act,” and so forth. Translating such concepts into computational terms is not easy, nor would matters improve if one tried to describe them *ab origine* through computer languages. Nor can it be overlooked that in code-driven law the role of the interpreter changes significantly, with the discretion of those who apply the norms being greatly restricted. This shift may have profound implications not only for the special part, but also for the focusing of fundamental categories of the general part — intent, negligence, and culpability — categories in which the limits of algorithmic formalization become truly visible.

---

<sup>7</sup> Particularly advanced are the projects developed in Australia and New Zealand. See, respectively, the Australian *Rules as Code* initiative, available at <https://www.govcms.gov.au/dxp/rules-code-rac>, and the New Zealand report *Better Rules for Government: Discovery Report*, available at <https://www.digital.govt.nz/dmsdocument/95-better-rules-for-government-discovery-report/html>.

<sup>8</sup> On this point, I refer to the well-known volume by U. ECO, *Dire quasi la stessa cosa. Esperienze di traduzione*, Milan, 2003, which brings together a series of essays devoted to the subject of translation.

### 5.1. *Consequent Changes in the Processes of Applying and Interpreting Law.*

The observations just made provide an occasion, by way of conclusion to the reflection on the change in the symbolic code used to formulate norms, to offer a few brief considerations on the characteristics of interpretation performed through artificial-intelligence systems. It must immediately be made clear that such systems know, process, and apply law in a way that is profoundly different from that of human beings. This is by no means a banal clarification: artificial intelligence increasingly often — and also in order to make interaction with users easier — presents itself and communicates by imitating the forms of human reasoning. Yet beyond that external resemblance, accentuated by the desire to appear user-friendly, the operations it performs remain radically different from those proper to human thought.

Human interpretive practice is always, so to speak, “situated”: it develops within a context, a tradition, a mental habitus; it is oriented by purposes, values, and principles; it entails an understanding of normative meaning that is located against the background of a broader historical, cultural, axiological, and experiential horizon. Even the process of subsumption, which is customarily represented as a logical procedure, entails, as is well known, a sequence of evaluative judgments: both in defining the major premise of the judicial syllogism and in evaluating the correspondence between the norm thus reconstructed and the historical fact.

Artificial intelligence, by contrast, imitates human reasoning but operates according to its own modalities. It has no experiential cognition of the world: it therefore ignores the infinite richness and variability of life and of its situational arrangements. It relies instead on statistical and computational models that detect correlations in data, without a semantic understanding of their meaning. In systems based on machine learning and neural networks, what we call “interpretation” assumes, from an operational standpoint, the form of a probabilistic inference: the system is trained on large datasets — statutory texts, judicial decisions, regulatory materials — and learns to predict, for a given input, the statistically most probable output.

In other words, when a case is submitted to it, artificial intelligence does not interpret and apply the law in the sense in which a human interpreter does — an interpreter for whom the use of cognitive capacities born of the complexity of experience is inevitable. Artificial intelligence identifies the answer in the form of a mere linguistic string, choosing the one that best corresponds to the patterns learned during training. At least three implications of particular importance follow from this.

First, algorithmic interpretation depends decisively on the training data. Any bias, gap, or implicit assumption incorporated in such data is transferred into the results. Interpretation is therefore not the outcome of an explicit process of reasoning, but of an opaque accumulation of previous instances.

Second, it lacks, so to speak, an authentic justificatory dimension. Human judges are required to give reasons for their decisions, articulating the arguments that connect the norm to the case. Artificial-intelligence systems, by contrast, may apparently

produce explanations, but these do not reflect the real decision-making process; they are “justifications” that imitate the operative style of human jurists, while differing radically from it. Since such reasons do not reflect the actual operation of a human mind, they are nothing more than post hoc reconstructions.

Third, AI-driven interpretation tends to favor the continuity of judicial trends over innovation. A human jurist may depart from established orientations, innovate, or even overturn precedents. Artificial-intelligence systems, by contrast, are structurally inclined to reproduce existing patterns, which may lead to a form of disheartening conservatism. Perhaps the fanatics of predictability will rejoice; but it is a joy that, to use a celebrated line from Dante, immediately turns back into tears, since it places the judge, but also the lawyer and the citizen, before a law petrified by the great computational tautology.

That said, I certainly do not intend to exclude radically the possibility that artificial intelligence may play a role in legal interpretation. On the contrary, it certainly offers powerful tools for processing large volumes of data, identifying similarities among cases, and suggesting possible lines of argument. Its role is, moreover, increasingly the object of legal regulation. Reference may be made, above all, to Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence and, as regards Italy, to Law No. 132 of 23 September 2025.

With particular regard to criminal law, it is nevertheless desirable that any transition from text-driven law, based on natural language, to code-driven law, based on computational codes, should proceed with great caution. It would be appropriate, for example, at least in the initial period, for computational law to be limited to sectors already characterized by a high degree of technical complexity and conceptual formalization. For the reasons set out above, it appears problematic to express as code the normative descriptions typical of traditional crimes. As we have repeatedly recalled, they depend on actions, situations, and features of sensible experience, or require value judgments incompatible with the operation of non-human intelligences.

## **6. Changes in Normative Style: Crisis and Renewal of the Offense Definition.**

The transformation to which we now turn concerns the normative style through which criminal conduct is described in offense definitions. By normative style, I mean the functional prose used to formulate commands and prohibitions backed by criminal sanctions.

In writing legal rules, the legislator has before him various stylistic options through which normative contents may assume a recognizable configuration. Norms may be formulated as peremptory commands or may be articulated through the description of a fact or of a sequence of life events, as happens in the offense definitions of criminal law; they may appear through conceptual and abstract statements, or present themselves as narrative and recipient-oriented communication, that is, communication optimized for a particular addressee — the ordinary citizen, the legal technician, the

judge, and so forth. Stylistic variations may be highly significant, entailing a transition beyond the limits of individual literary genres, where, for example, the narrative-fictional character of the prose is accentuated. Yet, as has happened in the past and may happen again, it is also possible to imagine moving beyond consolidated communicative genres: it is not science fiction to hypothesize that legislation may take the form of a multimedia message, or even a synesthetic message.

As we have repeatedly maintained, the conscious renewal of legislative style presupposes a thoughtful and competent assessment of the semiotic options available. This is especially so in view of the crisis that today affects the traditional form through which the criminal norm of the special part takes shape: the offense definition.

### 6.1 *The Crisis of Traditional Offense Definitions.*

The offense definition — the central communicative device of substantive criminal law — has long been in crisis<sup>9</sup>.

The roots of this crisis are multiple:

#### 6.1.1. The Growing Difficulty of “Ordering the World According to the Appearance of Things”

At the heart of the crisis lies a structural transformation, one that reflects a profound reconfiguration of contemporary societies. What is at stake is a decisive shift in the epistemological framework through which we organize and interpret the world. For centuries, the visible form of things constituted a primary criterion for the cognitive and axiological ordering of reality. Human beings have constantly organized their experience and relationships by reference to the perceptible forms of objects and conduct. These forms, often marked by a pronounced ritualistic standardization, displayed a morphological constancy and a univocity of meaning that today seem lost. That ordering principle is wavering; our capacity to order the world according to the appearance of things has been strongly eroded. Paradoxically, the form of a fish is more

---

<sup>9</sup> In the works cited in the opening note, I have analysed the reasons for this crisis, its manifestations, and possible ways out of it. As regards the difficulties that the offense definition today encounters in containing judge-made law, any bibliographical indication is bound to be partial and insufficient: the issue is truly at the centre of the Italian criminal-law debate.

I shall confine myself to mentioning R. ALAGNA, *Dialogo breve sulla tipicità penale*, in *Studi in onore di M. Ronco*, Giappichelli, Turin, 2017, pp. 3 ff.; M. DONINI, *Fattispecie o case law? La “prevedibilità del diritto” e i limiti alla dissoluzione della legge penale nella giurisprudenza*, in *Questione giustizia*, 2018, no. 4, pp. 79 ff.; F. GIUNTA, *Un diritto penale necessariamente e strettamente giurisprudenziale*, in [www.discrimen.it](http://www.discrimen.it), November 18, 2022; V. MANES, “Common law-isation del diritto penale”? *Trasformazione del nullum crimen e sfide prossime future*, in *Cass. pen.*, 2017, pp. 955 ff.; ID., *Dalla “fattispecie” al “precedente”: appunti di “deontologia ermeneutica”*, in *Dir. pen. cont.*, January 17, 2018, pp. 1 ff.; F. PALAZZO, *Legalità fra law in the books e law in action*, in *AA.VV., Cassazione e legalità penale*, ed. by A. CADOPPI, Rome, 2017, p. 27; C. SOTIS, *Vincolo di rubrica e tipicità penale*, in *Riv. it. dir. proc. pen.*, 2017, pp. 1346 ff.

likely to appear as a decorative motif — on a dress, a bag, a piece of ceramic, and so on — than as the appearance through which fish reaches our tables as food.

The legislator too, as we know, encounters growing difficulties in describing unlawful conduct by identifying the paradigmatic modalities of its commission, the sufficiently stable and univocal forms upon which to build the architecture of a “typical” offense definition. The visible configurations of reality no longer present themselves as fixed and coherent; they appear unstable, fluid, ambiguous, polysemic.

Consider, for example, the definition of the typical conduct with regard to “new crimes” such as tax fraud, insider trading, self-laundering, or stalking. What is their typical visible face? Through what morphologically significant and constant form can they be recognized? It is difficult to say.

This profound transformation in the way we recognize what is relevant, what carries meaning, immediately affects the way in which the legislator conceives and formulates crimes.

#### 6.1.2. The Progressive Dematerialization of Socially Significant Reality

A second order of reasons underlying the crisis of the offense definition lies in the progressive dematerialization of social and economic life. The objects and interactions that shape our daily experience are increasingly detached from physical space and tangible presence. Globalization, digital technologies, and virtual environments all point to a gradual eclipse of materiality. If once crimes against property required a physical intrusion, trespassing into the sphere of another’s dominion, today, as one commonly says, a single click on a keyboard may suffice. As is evident, the dematerialization of social life makes it extremely difficult for the legislator to represent the prohibited conduct by describing the visible morphology of its paradigmatic mode of realization.

#### 6.1.3. The Necessary Proceduralization of the Balancing of Conflicting Interests

Finally, to the observation concerning the effects of an increasingly dematerialized world must be added the proliferation of protected legal interests, often competing, conflicting, and difficult to reconcile. One may think of the interest in the “environment,” and of the need to calibrate its criminal-law protection by balancing it against the right to work and freedom of enterprise, without forgetting the independent relevance of the “landscape.” The multiplication of legally relevant and conflicting interests makes it impossible to establish a definitive equilibrium once and for all, carving the form of the prohibited conduct once and for all. In many sectors, a reasonable balance among the various interests can be achieved only through regulatory frameworks and procedural mechanisms, often external to criminal law, which identify, weigh, and coordinate the competing interests from time to time. Administrative structures and procedures thus become the place in which such conflicts are mediated and compromises are reached. Hence the symbiosis between administrative regulation and criminal regulation, with the frequent marginalization of the latter into a merely

sanctioning role. These are well-known problems, and their connections with the uncontrolled expansion of extra-codicem legislation and with the so-called decodification of criminal law have been widely discussed. We shall return to them later, in section 7.

## 6.2. *Can Artificial Intelligence Renew the Formulation of Offense Definitions?*

One promising strategy for addressing the crisis of the offense definition is to rely on new technologies and artificial intelligence. Can digitalization, computerization, artificial intelligence, and augmented reality be used to renew the forms through which criminal prohibitions are conceived and formulated? Can new technologies provide tools capable of revitalizing the definition of crimes, enabling a more effective representation of wrongdoing?

As we know, traditional offense definitions shape the unlawful act by describing its recognizable configurations: crimes such as theft or sexual violence represent unlawful conduct according to structured and identifiable patterns. Today, as we have repeatedly emphasized, this ordering effort often fails. It may therefore be tempting to turn to new technologies and attempt to improve drafting capacities or to enrich the normative representation of wrongdoing.

We know that artificial intelligence can detect, recognize, and evaluate the forms of human conduct. The recognition of behavioral patterns already operates in high-risk public spaces such as airports and railway stations, as well as in commercial settings, such as supermarkets, where it is necessary to prevent certain categories of offenses. These technologies show that human behaviors can be read and interpreted by artificial intelligence.

Visual technologies, moreover, do not merely reproduce what appears to the eye. They make it possible to integrate observable conduct and contextual data by combining images, sounds, texts, and other relevant information. A layered representation of complex environments thus becomes possible, one in which the various informational levels — spatial, temporal, relational, symbolic — are brought into connection. In this perspective, “augmented reality” programs may offer enriched representations of relevant environments, objects, conducts, and scenarios. Our everyday interaction with smartphones already provides an immediate illustration of these possibilities<sup>10</sup>.

Yet serious risks weigh on these perspectives. Systems based on the algorithmic recognition of behavior may easily become instruments of pervasive control. The very technologies that promise clarity may generate new forms of opacity and power.

---

<sup>10</sup> On the subject of “augmented reality,” see, among others, W. BARFIELD, M. J. BLITZ (eds.), *Research Handbook on the Law of Virtual and Augmented Reality*, Cheltenham, UK–Northampton, MA, 2018; M. LEMLEY, E. VOLOKH, *Law, Virtual Reality, and Augmented Reality*, in *University of Pennsylvania Law Review*, 2018, vol. 166, pp. 1051 ff.; J. H. SØRAKER, *Virtual Worlds and their Challenge to Philosophy: Understanding the “Intravirtual” and the “Extravirtual”*, in *Metaphilosophy*, 2012, vol. 43, no. 4, pp. 499 ff.

Disturbing examples are offered by the sophisticated systems of behavioral monitoring that support “social credit” mechanisms already operating in some countries<sup>11</sup>.

Leaving such concerns aside, let us return to our question: can new technologies help renew the way in which offense definitions are conceived, written, communicated, and applied?

The fundamental question is whether the role of artificial intelligence can evolve from the monitoring of places and the surveillance of behaviors to the distinct and far more demanding function of conceiving and formulating normative sources. This is a significant leap. It is one thing to detect dangerous or socially harmful behaviors already defined as such by existing norms; it is quite another to conceive and construct the normative description through which law defines those behaviors in the abstract as unlawful.

In addressing this question, we must also bear in mind that the offense definition traditionally performs at least two distinct and fundamental functions<sup>12</sup>. On the one hand, it conveys to citizens a message concerning the prohibitions and obligations backed by criminal sanctions; on the other, it communicates to judges the conditions under which they may exercise the power to convict and impose punishment. These are different functions, and yet the definition of the crime performs both through the same narrative formulation. In other words, offense definitions operate both as rules of conduct for citizens and as rules of adjudication for judging authorities<sup>13</sup>.

Unless one chooses to separate these two functions by producing two distinct sets of rules — rules of conduct for citizens and rules of adjudication for judges — new technologies would have to be capable of renewing offense definitions without compromising their ability to perform both functions simultaneously.

Before proceeding further, it is useful to recall that we are moving in a context that is uncertain and difficult to decipher. The future development of technologies — and their role in the daily life of law — remains extremely hard to predict. With this caution in mind, we may now examine some of the options currently on the table.

---

<sup>11</sup> K. WERBACH, *Panopticon Reborn: Social Credit as Regulation for the Algorithmic Age*, in *University of Illinois Law Review*, 2022

<sup>12</sup> In *Fantastic Voyage*, cited in the opening note, pp. 106 ff., I distinguished several fundamental functions of the offense definition: the “motive” function, consisting in command and cultural orientation, through which rules of conduct are addressed to citizens; the “control” function, designed to guarantee citizens that the judge exercises the power to punish only within normative constraints; and the “regulatory” function, aimed at identifying proportional classes of punishment. The third function will not be addressed here.

<sup>13</sup> See the consequences drawn from this distinction by American scholarship, which has envisaged the separate codification of rules of conduct and rules of adjudication: P. ROBINSON, *Rules of Conduct and Principles of Adjudication*, in *University of Chicago Law Review*, vol. 57, 1990, p. 729 ff.; ID., *A Functional Analysis of Criminal Law*, in *Northwestern University Law Review*, vol. 88, 1994, p. 857 ff.; ID., P. GREENE, N. GOLDSTEIN, *Making Criminal Codes Functional: A Code of Conduct and a Code of Adjudication*, in *Journal of Criminal Law & Criminology*, vol. 86, 1996, p. 304 ff. For a critique, see M. PAPA, *Fantastic Voyage*, cit., p. 169 ff.

### 6.3. “Narrative Scripts” as an Alternative to Traditional Offense Definitions.

One possibility consists in prompting artificial-intelligence systems to formulate — still through written statements — the normative definition of crimes. Artificial intelligence might respond to such prompting by attempting to write offense definitions through the best available drafting techniques.

Yet the task of writing norms is much more complex and difficult than the good linguistic drafting of legislative material. Good drafting is something that comes afterwards: it comes after one has conceived and focused what must be written.

This question therefore brings us back to the fundamental problem of contemporary criminal law: the ideation of the offense definition. Will artificial intelligence ever be capable of grasping the typical form of wrongdoing, of bringing into focus its paradigmatic essence? The task is particularly demanding, as is well known, when the offense is entirely new, when it must be defined and formulated for the first time. Leaving the answer to that question open, it may be interesting to pause here over a new possible perspective on legal drafting: a perspective that could interact particularly fruitfully with artificial intelligence.

The difficulty of drafting offense definitions in such a way as to grasp the phenomenological dimension of wrongdoing and describe iconographically recognizable patterns of aggression is, as has repeatedly been emphasized, a distinctive feature of contemporary criminal law<sup>14</sup>.

If one wishes to preserve the iconographic and phenomenological character of offense definitions, it may be useful to explore an interesting notion developed in the cognitive sciences: the notion of the “script.” In general terms, a script is a cognitive structure that represents a typical sequence of actions unfolding within a given situation. The concept was introduced by Roger C. Schank and Robert P. Abelson in their volume

---

<sup>14</sup> On the topic of scripts and their relationship with casuistry and “indicators” of typicality, I shall return in a specifically dedicated essay. The structure of the “script” offers a way to explore new forms of legislation that depart from the traditional model of the criminal offense definition. These new forms should interact fruitfully with the use of technologies — in particular artificial intelligence — which may play a fundamental role both in overcoming the fragmentation and multiplicity of casuistry and in making it possible to develop more sophisticated normative tools.

The issues addressed in this paragraph are closely connected to those discussed by several colleagues who, in reflecting on the crisis of legality in criminal law, have recently turned their attention — also from a historical perspective — to the role of casuistry. I refer, in particular, to the work of ALBERTO DI MARTINO and MICHELE PIFFERI, effectively summarized in their essay *Eredità casuistica e fattispecie penale. Radici, ritorni, nuovi scenari*, in *Quaderni fiorentini per la storia del pensiero giuridico moderno*, 2025, p. 79 ff. See also the articles by GIOVANNI TUZET, GIOVANNI PINO, STEFANO TUTINO, LUCA GARLATI, and MARIA STELLA TESTUZZA, published in the same issue of *Quaderni fiorentini* (pp. 135–260).

Particularly interesting in this regard is also the reflection offered by F. VITARELLI, *Il disvalore penale tra testo e contesto. Prolegomeni per una formalizzazione degli “indici di tipicità”*, Turin, 2025, which addresses the inadequacy of the traditional model of an “abstract” and “static” offense definition, while envisaging the possibility that new models of legislation may rely on a series of “indicators” of typicality. Such a perspective would entail a sort of “proceduralization” of the typical fact, which would be physiologically reshaped through the dynamic interpretation of case law.

Scripts, Plans, Goals, and Understanding<sup>15</sup>. Written in 1977, this classic remains a rich source of suggestive inspiration. In their reconstruction, a script is a mental schema that organizes a typical situation, a predictable sequence of actions, the roles of the actors involved, the implicit purposes, and the expected outcomes. Its function is to enable individuals to interpret events rapidly and efficiently. The usual example is the “script” that allows us to predict and therefore understand what happens when one enters a restaurant: the script indicates a sequence that will recur in a stable way — after entering, one is assigned a table; the waiter arrives with the menu; one is given time to choose the dishes; then one orders, waits, receives the courses, consumes them, asks for the bill, and so on.

As already observed, offense definitions are generally characterized by an underlying narrative structure: commands and prohibitions are not expressed as directly prescriptive statements — “do not steal,” “do not kill!” — but are inferred from the description of human conduct and of its modalities. This narrative dimension, though essential, often remains implicit, since the offense definition continues to present itself as a legal norm articulated through abstract and conceptual categories.

Given that this is, as is evident to everyone, the current expressive mode of criminal prohibitions, one might consider a possible evolution of legislative technique that would accentuate the narrative component of the prohibition. The idea is to valorize that dimension even more, bringing it out from the background and placing it in the foreground, to the point of making it the primary mode through which wrongdoing is represented. Crimes could assume the form of structured narrative patterns: genuine scripts describing the typical unfolding of wrongdoing in space and time.

A criminal code based, at least in part, on scripts would therefore describe crimes not through abstract and “static” conceptual definitions, but through structured and dynamic narrative patterns. The hope is that they could be formulated in such a way as to grasp the typical scenography of wrongdoing: the roles of the actors involved, the sequence of actions, the relevant circumstances, and the harmful event that gives the conduct its criminal meaning.

The example of sexual violence may help clarify what is meant by a script-based representation of criminal conduct. Traditional legislation usually defines the offense through a set of verbal elements — violence, threat, abuse of authority, or taking advantage of a condition of vulnerability — combined with the performance of a sexual act. A narrative script, by contrast, reconstructs the offense as a structured sequence of events. The sequence ordinarily begins with an interpersonal encounter and the emergence of a sexual initiative. At a certain point, the absence of consent becomes manifest, whether through an explicit refusal or through circumstances that prevent the formation of a free and valid will.

The decisive passage of the script occurs when the actor proceeds despite that absence of consent, or by resorting to coercion, intimidation, abuse of authority, or

---

<sup>15</sup> R. SCHANK, R. ABELSON, *Scripts, Plans, Goals, and Understanding, An Inquiry into Human Knowledge Structures*, Hillsdale (NJ), 1977.

exploitation of a position of advantage. The sequence culminates in the imposition of a sexual act upon the other person. From this perspective, the typical structure of the offense does not lie simply in the isolated description of certain elements, but in the dynamic pattern through which an interaction evolves into an infringement of another person's sexual autonomy. The offense thus appears as a temporal screenplay of conduct rather than as a static verbal definition.

Within such a framework, artificial intelligence could prove particularly effective in identifying recurring behavioral patterns within large datasets of real cases, helping to detect and formalize the narrative structures underlying certain forms of wrongdoing. This is because contemporary AI systems are particularly well suited to recognizing patterns within large masses of data. By analyzing judicial decisions, police reports, investigative files, and other empirical materials, machine-learning techniques can identify recurring sequences of actions, typical configurations of actors and circumstances, and common trajectories through which certain harmful events develop. A series of constant and significant indicators might also emerge, capable of corroborating the typicality of the sequences that characterize the narrative script.

It is hardly necessary to underline that the study of scripts is part of a proposal for further inquiry that remains to be developed. That proposal certainly does not at present advocate a drastic change in the legislative technique used in criminal law. No one intends today to propose that a judge convict or acquit by comparing the facts directly with a narrative script. We shall return to the point in a specific study, limiting ourselves here to signaling certain — albeit highly problematic — potentialities.

In closing this section, let us stress that identifying recurring patterns is not equivalent to delineating the paradigmatic form, or the script, of a crime. The creation of a new offense definition requires the capacity to isolate, within the complexity of social experience, the morphology of conducts — or of sequences of conduct — that deserve normative recognition. This task implies imagination, abstraction, and, above all, a series of evaluations concerning the significance of the factual modalities considered.

The work of the legislator has always required a considerable dose of creative imagination, and it requires even more today<sup>16</sup>. Both the ancient treatise writers and those who gave shape to custom and then to positive-law codifications did not limit themselves to passively recording serial occurrences; they nevertheless shaped precise “paradigmatic representations” of wrongdoing, so as to orient social interaction and the administration of criminal justice. Artificial intelligence may help detect, on a statistical basis, recurring patterns and structures in human action. However, the act of selecting and modeling such patterns, elaborating paradigmatic forms of criminal wrongdoing, will still have to depend, at least for the near future, on a distinctly human resource: the creative imagination of those who forge offense definitions.

---

<sup>16</sup> I refer once again to my writings cited in the introductory note, in particular to my lecture *La forza immaginante del diritto penale*, delivered on the occasion of the conferment of the title of Doctor *honoris causa* by the University of Buenos Aires in November 2024.

#### *6.4. Conceiving and Describing the Face of Crimes: a Challenge Addressed Only to Human Imagination?*

I have elsewhere developed a broader reflection on the themes discussed here, outlining various evolutionary scenarios and possible outcomes. While, as we have seen, new technologies may prove of doubtful usefulness, it remains appropriate to continue writing offense definitions by attempting to describe visible patterns of wrongdoing.

This difficult task may avail itself of new technologies, and we have just discussed this. But at bottom it also requires a new vision and a new methodology. The renewal of normative style can succeed only if the legislator is capable of significantly improving drafting skills, becoming aware that drafting good criminal legislation is not so different from producing good literature. Both activities require mastery of the tools of creativity, a creativity that may manifest itself usefully if it succeeds in resembling artistic creativity.

Offense definitions should be modeled with the same imagination and the same narrative care that a writer devotes to conceiving and developing a novel. It is essential to draw upon fictional creativity, so as to give form to the paradigmatic, typical dimension of wrongdoing. As in the narratives of ancient mythology, as in the stories of great novels and great films, artistic creativity makes visible what would otherwise escape us. There are dimensions of the spirit that only art is capable of “placing before our eyes.” Wrongdoing too is a dimension of the spirit: wrongdoing too waits to disclose itself morphologically through the narration of great legislator-artists.

In short, identifying what is truly “typical” means grasping what is paradigmatic and symbolically expressive of a value or a disvalue: something that cannot be captured by photographing the existing or by relying on the models of computational calculation.

The capacity to construct effective criminal norms depends on the capacity to render wrongdoing visible, to articulate it through mental images and metaphors that correspond to a shared experience. In this sense, the renewal of criminal law may indeed be linked to technological innovation, but it must above all rely on the artistic capacity of the legislator and of those who will assist him.

### **7. Changes in the Medium (Vehicle, Support, Carrier) of the Normative Message.**

As anticipated at the beginning of our inquiry, a further perspective opened by new technologies concerns the medium, the vehicle or carrier of norms, the “support” that incorporates criminal legislation and through which it is communicated to citizens. Over the centuries, legal norms have been represented and conveyed by oral messages, gestures, engraved stones such as the Rosetta Stone, sheets of parchment, papyrus scrolls, tablets, and printed pages. New supports for legislation, such as digital information and electronic data, today open unprecedented possibilities for the systematic organization, structuring, and management of criminal law.

Digitalization profoundly transforms the nature and potential of the medium, reshaping the relationship between the medium and the norms it conveys. Its most significant effect consists in liberating norms from their physical support. No longer fixed to stone, marble, clay, wax, papyrus, or paper, norms are freed from the material supports to which they had remained bound since the time of Hammurabi. Released from centuries of textual rigidity, they can free themselves from a fixed location. Once detached from their material support, norms exist as “data,” that is, as pure representations of regulatory contents. They can therefore be organized, processed, and interconnected as data, freed from the constraints imposed by old physical supports. They can be inserted into digital matrices that ensure a much more conscious, flexible, and efficient management than when normative organization had to reckon with the rigidity of stone, parchment, or printed paper.

These developments transform both the way in which norms are conceived and the way in which they are communicated. The traditional codes now in force — criminal, civil, procedural, and so on — were conceived and structured with reference to the form of the printed booklet: the methodology that accompanies the drafting of codes still reflects this technological horizon, a horizon that dates back to the eighteenth century. The code-form is the child of the code as a paper object that incorporates a text with a rigid structure. The transformation considered here, by contrast, points toward a different model, one that takes technological innovation seriously: digital tools make it possible to design and manage new systems of legal norms and new organizational forms of legislation<sup>17</sup>.

### 7.1. *From the Model of the Criminal Code to Networked Normative Structures.*

As just recalled, for centuries legislation has been conveyed through written texts. Its structure has therefore been shaped by its own material embodiment: by the extremely rigid architecture of paper laws and codes.

In codified systems, crimes are generally organized in a system that takes into account the protected legal interests. Theft appears among offenses against property, while perjury is placed among offenses against the administration of justice. We know that the material arrangement of norms within the paper text certainly conditions interpretation: the location of each norm, its topographical placement, expresses a systematic choice rich in consequences, because it expresses a particular relationship with the protected interest and with the other norms placed to protect that or other interests.

On closer inspection, the topographical organization of the code itself becomes a normative datum: this is not assertive normativity, but structural, architectural

---

<sup>17</sup>I have devoted to this subject the essay *Dal codice penale “scheumorfico” alle playlist. Considerazioni inattuali sul principio della riserva di codice*, in *Diritto penale contemporaneo*, 2018, p. 129 ff., also taken up in *Fantastic Voyage*, cit., p. 197 ff. See also *La parte speciale del diritto penale: una introduzione*, the opening chapter of *Lezioni di diritto penale. Parte speciale*, 3rd ed., Turin, 2025, a volume co-authored with F. CINGARI and A. VALLINI.

normativity. This rigid textual architecture may condition the interpreter in an absorbing way, leading him to overlook or underestimate other relevant connections among offense definitions. Indeed, some incriminating norms appear conceptually distant even when they share similar structural elements. For the interpreter, the “geographical” distance between certain norms may seem almost measured in light years. Thus notions such as “possession” or “detention,” although present in multiple offenses, are not related to one another, nor systematically coordinated. The “jump,” the distance that separates provisions within the code — both topographically and with regard to the protected legal interest — may therefore condition interpretation excessively.

Digitalization breaks this rigid architecture. In the digital environment, the structure that gathers and connects norms is no longer textual or spatially fixed. Digitalized norms have no physical location; they exist as data. They can be dynamically retrieved, displayed in multiple configurations, and connected within informational matrices.

Once law becomes “computer data,” it can be organized according to criteria independent of physical arrangement. Even the most elementary data system demonstrates the point: databases “know” the properties of the information they contain and can connect elements on the basis of selected parameters. In the digital age, norms are no longer inscriptions in stone, but information capable of being structured and managed through computer tools and artificial intelligence.

This transformation makes it possible to conceive normative systems as “networks”: networks of norms to be connected simultaneously and independently of their topographical location. In short, the possibility emerges of reorganizing legislation, potentially that of the entire legal order, by structuring it as a networked system that connects all norms in force. It is a project aimed at overcoming the architecture of paper texts and, at least at the topographical level, dissolving even the rigid disciplinary boundaries due to traditional Enlightenment codification. Within such a framework, we could also imagine criminal norms as a set of data not bound to a fixed spatial order. No norm would be tied to a permanent textual “address.” Theft would no longer be, physically, the next-door neighbor of embezzlement or robbery.

This being so, networked legislation should obviously not dissolve into an unstructured mass of isolated data. The networked system must become a system; it must assume the role of a network governed by rules. Those rules, whose determination belongs to the legislator, should establish hierarchies and chronological priorities, regulate conflicts and concurrence of norms, define references and saving clauses, coordinate, with regard to criminal law, provisions of the general part and the special part, or create strong thematic clusters — for example in areas such as organized crime, corruption, or terrorism. Thus theft, embezzlement, and robbery, while not sharing the same physical neighborhood, could nevertheless be closely connected by the will of the network regulator. Thematic clusters could include and integrate criminal and non-criminal provisions, thereby seeking to remedy the symbiosis among heterogeneous sources that today undermines the rigid framework of separate codifications of the various branches of law and produces the centrifugal disintegration of codes.

The construction of a “regulated” digital network to replace the current code-form would constitute a remedy for the damage caused by “decodification.” Its usefulness would be immediate both for actors in the judicial system and for citizens. We cannot develop the argument here without risking a naive simplification of a task of extraordinary complexity. Replacing a physical architecture, such as the present code-form, with a virtual architecture such as digital networks would be an enormously difficult undertaking. The architecture of codes possesses, in and of itself, a normative function: as we have said, it conditions the interpretation of norms, also modifying the impact of the various formants that influence interpretation, first and foremost the judicial formant and the scholarly formant.

Before closing this topic, let us note a phenomenon that the construction of digital normative networks could accentuate and develop. Given the digital network, users could extract, from time to time, sets of norms tailored to their needs: they could assemble personal normative “playlists,” preparing, according to particular needs, on-demand collections or “instant codes.” Such playlists could gather norms according to specific search keys.

Unlike the network, which, as noted, would receive legislative regulation, personal playlists would obviously have no legal force. The structure of the list, its architecture, would be due to the user and would have effects only with respect to the user’s needs. Judges, lawyers, and researchers could build them freely according to the needs of the case, not unlike what some people — for example, in my experience, students — already do today when preparing their own digital collections of legislation.

As noted, such playlists would be useful for keeping at hand the normative material of interest: for supporting arguments in litigation, persuading opposing parties, or developing scholarly theses. The criteria for searching and assembling playlists could be extremely varied, from those relating to relevance to the legal problem at hand, to shared legal interests such as personal integrity, property, or the administration of justice, or thematic affinities such as offenses arising from organized crime or corruption. Nor can it be excluded that someone might be interested in selecting and collecting on the basis of more extrinsic criteria, such as the occurrence of terminology shared by multiple norms — “profit,” “possession,” “cause,” and so forth.

Now, while, as has been clearly stated, playlists would have no binding legal force, they could nonetheless prove highly effective from a heuristic and argumentative standpoint, identifying chains and sequences capable of being valorized in court. The flexible structure of digital networks may thus allow interpreters to discover “new” connections among norms, connections previously unnoticed. What seemed distant or unrelated may reveal latent structural affinities. The judge would remain responsible for assessing the plausibility of the resulting argument. This is not a new judicial function. It represents an extension of the ordinary task of evaluating the systematic coherence and persuasive force of a thesis.

In the end, the digital reorganization of criminal law opens not only new technical possibilities but also new intellectual adventures: interpretation itself may become an exploration of the latent architectures that exist within the normative network.

## 7.2. *The Metamorphosis of the Medium: from Written Language to Multimedia.*

The changes concerning the medium, the carrier that transports the normative message, may extend well beyond the mere digitalization of verbal legislative texts. Legislators might not only valorize the digital nature of data, but also resort to forms of multimedia communication, combining text with images, audiovisual sequences, or other technological means capable of illustrating the typical structure of criminal conduct.

In such a scenario, criminal legislation could progressively evolve from purely textual definitions toward audiovisual forms. Beyond this, one might even imagine, in a genuinely futuristic perspective, a sort of synesthetic criminal law, involving all five senses in the reception of information concerning legal commands and prohibitions.

The prospect of multimedia legislation would represent a radical and controversial transformation in the history of law. And yet digital technologies make such a development increasingly conceivable. Images, videos, simulations, and forms of “augmented reality” are capable of representing the typical morphology of criminal conduct more directly than traditional verbal descriptions allow, thereby strengthening the communicative power of criminal norms. Words describe actions by referring to concepts and categories. Images, by contrast, can represent the conduct itself, showing the configuration of bodies, objects, movements, and spatial relations that constitute the relevant event. In this sense, multimedia legislation could bring the representation of criminal wrongdoing closer to the sensible reality from which criminal law ultimately draws its meaning.

Such a transformation would raise, as noted, questions of great importance. Citizens have long been accustomed to translating verbal definitions of crimes into rules of conduct capable of guiding their behavior. Would they now be able to transform these audiovisual representations of wrongdoing into rules of conduct, into practical standards of action?

Still more uncertain, however, is whether judges would be able to use such audiovisual representations as rules of adjudication, that is, as normative standards for determining, in a concrete case, whether the legal conditions for attributing criminal liability and applying the relevant sanction are satisfied. For centuries, criminal law has not merely been a text to be read; it has been a text to be applied. It concerns not only those who wish to know what may be done, but also judges who must verify whether the conditions exist for exercising the power to punish. In theory, the legislator could also make use of expressive means and styles different from classical legislative prose; many of these means and styles certainly optimize communicative effectiveness. Yet if we think of the moment at which criminal law must be applied, the situation becomes considerably more complicated. Moving away from traditional expressive means and stylistic canons undoubtedly endangers certain fundamental requirements: clarity, determinacy, equality of treatment, and foreseeability of legal effects.

## 8. Conclusion.

The issue remains highly complex and the future uncertain. As the philosopher Marshall McLuhan put it with great effectiveness: «We look at the present through a rear-view mirror. We march backwards into the future».<sup>18</sup>

Much of what we have thought and discussed in recent years will probably end up in the already evoked “museum of proto-futures,” the repository of all fallacious visions of tomorrow. It may prove erroneous, for example, to state categorically that human legislative production and human judicial decision-making admit of no alternatives. For the moment, the contribution of artificial intelligence to the renewal of offense definitions appears limited, but this does not mean that such limits are permanent.

In the future, the ideation and elaboration of criminal laws will increasingly require an essential resource: imagination, the capacity to conceive creatively the paradigmatic form of wrongdoing. If artificial intelligence proves capable of developing such creative imagination, if it succeeds in acquiring artistic talent, then it could become an excellent partner in the regeneration of the offense definition and of criminal laws.

---

<sup>18</sup> M. McLuhan, Q. Fiore, *The Medium is the Message. An Inventory of Effects*, New York, London, Toronto, 1967, p. 75.