

# The Division of Cognitive Labour in Law

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## ABSTRACT

Law makes assumptions about the workings of the human mind, assumptions that are common in folk psychology, i.e. our unreflective way of understanding people's cognition and behaviour, but which are contradicted by scientific study of psychology. This chapter tries to flesh out part of the myths created by our folk psychological understanding of institutions and those who operate in them: the fictional cognitive abilities of the agents postulated by law. It focuses in particular on how the law often seems to overestimate the human ability to solve problems individually and underestimate the importance of the division of cognitive labour. I will call this set of assumptions cognitive perfectionism. I will distinguish between two aspects of cognitive perfectionism: the assumption that agents are endowed with perfect rationality, that they behave like a *homo oeconomicus* (an assumption often criticised in the literature), which I will call *rationality perfectionism*, and the assumption that agents are endowed with the ability to process extremely large amounts of information (an aspect less considered in the literature so far), which I will call *knowledge perfectionism*. These assumptions give a distorted picture of the goals law can reasonably aspire to and of the best possible means of achieving them. At the same time, they seem to function as regulative ideals somehow essential to, and maybe even inseparable from and desirable in, our legal practice.

## KEYWORDS

cognitive perfectionism, folk psychology, division of cognitive labour

## CITATION

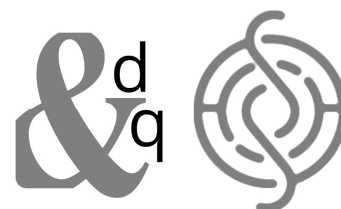
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Our dependence upon the word of others can be shown to be extensive and deep. We exhibit such dependence, though seldom acknowledge it explicitly, in our confident knowledge claims and actions in everyday life as well as in our more theoretical pursuits. In everyday life, we automatically relay sporting scores and judicial verdicts, we accept new financial burdens on the basis of reported pay increases, and we plan holidays on the basis of geographical, transport and accommodation information from others. In the sciences, we talk of what is known and has been proved in hosts of instances where we have not done the proving or “done the knowing”, and often this is in contexts where we wouldn’t have the individual resources for the relevant investigations anyway (COADY 1994b, 225)

There are two sorts of tools in the world: there are tools like a hammer or a screw-driver which can be used by one person; and there are tools like a steamship which require the cooperative activity of a number of persons to use. Words have been thought of too much on the model of the first sort of tool (PUTNAM 1975, 146)

*0. Introduction – 1. Cognitive perfectionism vs. Division of cognitive labour – 1.1. Autonomous propositional knowledge – 1.2. Autonomous conceptual knowledge – 1.3. Perfect individual rationality – 2. Cognitive perfectionism in law: three legal myths – 2.1. The myth of legality (ignorantia legis non excusat) – 2.2. The myth of consent (volenti non fit iniuria) – 2.3. The myth of the judge as “gatekeeper” (iudex peritus peritorum) – 3. Conclusion: is cognitive perfectionism essential to law?*

## 0. Introduction

Any legal system—whether democratic or not—is generally believed to produce its effects in virtue of the fact that people know and understand its provisions. One could even say that law just *is* whatever is understood by officials and citizens to be law<sup>1</sup>. Officials must understand law to be able to enforce it. Citizens must understand law to be motivated by the threat of sanctions, to be able to identify and exercise their rights, to be able to identify and fulfil their obligations. The ability of citizens to understand the law is supposed to have an additional function in constitutional democracies: The political legitimacy of a constitutional democracy is believed to be grounded on the possibility of citizens to assess, accept, and, when necessary, criticise official and legislative action<sup>2</sup>.

The standard story that lawyers seem to be constantly telling themselves about how citizens get to know and understand their normative environment, however, is scarcely believable. According to it, citizens *are* (or at least, if only they put enough effort into it, *can be*) perfectly informed and rational agents, able to comply to the desiderata of institutions by virtue of an autonomous and rational understanding of the legislative texts that the institutions produce as

<sup>1</sup> John Searle’s social ontology, which we will briefly discuss later, can be interpreted in this sense. See SEARLE 1997, SEARLE 2010.

<sup>2</sup> On publicity as an essential aspect of the ideal of the rule of law see for example CELANO 2013.

well as of the factual context in which they are supposed to be applied. This theory often emerges as an implicit assumption in legal reasoning and legal doctrines. Consider, for example, the issue of the non-retroactivity of criminal law: if someone is judged according to a statute that came into force after the crime that person is accused of having committed, this is perceived as a major violation of that person's human rights. The European Court of Human Rights spends a lot of its time and energy to make sure that the non-retroactivity of criminal law is protected. Every citizen must have the right to know in advance, and in detail, the legal consequences of his or her actions. But for how many citizens is this right accompanied by a real ability to exercise it? Almost none<sup>3</sup>.

This story has played an important role in our legal culture as a regulative ideal<sup>4</sup>. But to have a scientific comprehension of the functioning of institutions and to predict the practical effects that our legal decisions and policies of institutional design may have, we must recognize it as a fiction. It is not obvious why legal officials at all levels should conduct their legal reasoning and take their decisions *as if* citizens could have perfect individual knowledge of laws and legally relevant facts, as well as the ability to infer what their conjunction implies. Making factually false assumptions about people's cognitive abilities poses the risk of systematic distortions in practical reasoning and failures of instrumental rationality. To effectively protect the interests of real people, rather than hypothetical agents, judges' reasoning should maybe instead consider the real possibilities of understanding of the average individual and the real socio-linguistic dynamics through which he or she interprets legal concepts.

In this article, I would like to give a contribution to the discussion of this topic, suggesting that some implicit cognitive presuppositions of legal practice may be at odds with how science currently understands people to acquire and process knowledge. I would like to invite the reader to consider whether these implicit presuppositions have any essential significance in the field of legal practice, or whether a deeper understanding of the psychology by legal professionals could potentially eliminate them and maybe promote a more equitable and rational institutional design and administration of justice. The aim of the paper is to raise the question rather than provide an answer to it. I want to show how this question is important, taking a conceptual and philosophical perspective on it. The factual premises of the discussion will be sketched only in an impressionistic way and would deserve to be separately discussed on the basis of specific empirical studies. Showing the importance of the development of a line of empirical research in this direction is by the way an additional aspiration of this paper.

In the first section, I will try to briefly outline what I will call *cognitive perfectionism*. I will use this expression to refer to certain misconceptions, characteristic of folk psychology<sup>5</sup>, regarding how

<sup>3</sup> In some cases, the prohibition of retroactive application of criminal law extends to technical details of criminal procedure that not only no average criminal knows before committing a crime, but often not even an average criminal lawyer can remember by heart. *Del Rio Prada v. Spain*, for example, concerned the retroactive application of an unfavourable jurisprudential change in the granting of a prison benefit. The appellant, Ines Del Rio Prada, had been convicted of serious crimes linked to Basque separatist terrorism and had applied for the benefit of the *redención de penas por trabajo*, which allowed a reduction in sentence for work done inside prison. However, the Spanish Supreme Court had adopted a new interpretation, known as the "Parot doctrine", according to which the reduction should be calculated differently. The Grand Chamber ruled that this sudden change of the case law that preceded Del Rio Prada's convictions constituted a violation of her human rights, as it was unpredictable by her at the time. In this regard, see VIGANÒ 2022.

<sup>4</sup> A regulative ideal can be defined as a normative horizon towards which we should strive as far as possible. Such a normative horizon is a state of affairs that we evaluate as desirable or correct. See MARTÍ 2005.

<sup>5</sup> Folk psychology is «in one sense, a putative network of principles constituting a commonsense theory that allegedly underlies everyday explanations of human behavior; the theory assigns a central role to mental states like belief, desire, and intention.[...] In another, related sense, folk psychology is a network of social practices that includes ascribing such mental states to ourselves and others, and proffering explanations of human behavior that advert to these states. The two senses need distinguishing because some philosophers who acknowledge the existence of folk psychology in the second sense hold that commonsense psychological explanations do not employ

individuals are supposed to develop their beliefs, construct concepts, and employ them in their actions. In short, cognitive perfectionism is the misconception that we have a significantly greater personal understanding of our environment than we actually do, and the misconception that our cognitive abilities can operate autonomously without relying on division of labour with other agents.

In the second section, I will discuss how cognitive perfectionism affects legal practice. To do so, I will discuss three examples of cognitive perfectionist doctrines, three myths so to speak of contemporary legal systems: the myth of legality, the myth of consent, and the myth of the judge as a “gatekeeper”. I will also argue that law is traditionally characterised by two types of cognitive perfectionism, the idea that legal agents are perfectly rational (*rationality perfectionism*) and the idea that legal agents have perfect knowledge (*knowledge perfectionism*). Legal theory has mainly discussed the first aspect, while the second has traditionally been neglected. For this reason, the examples I chose are mainly intended to illustrate the second aspect rather than the first aspect.

In conclusion, I will raise the question of whether it would be desirable or even possible to eradicate cognitive perfectionism from legal practice or whether this is somehow essential to it. I won't give an answer to this question but I will try to briefly suggest some directions in which legal philosophical research about it could be developed.

### 1. *Cognitive perfectionism vs. Division of cognitive labour*

In any modern democracy, people “freely and consciously” select their representatives. Parliament transposes “the will” of the people into law. All laws get published so that everybody may “know” what they require. Judges “make decisions based on the law”, thus implementing the will of the people in particular cases. Punishment is only addressed to criminals who “willingly” broke the law, “knowing” beforehand the legal consequences of their criminal actions. All of those are key ideas in contemporary legal systems, and all of them are deeply entangled with problematic assumptions about how the mind of various actors within the legal system works.

An important strand of recent legal philosophical literature has been concerned with identifying these folk-psychological assumptions in the law and comparing them with the scientific picture of the mind offered by neuroscience and contemporary cognitive psychology. Part of this literature consists in critiquing and deconstructing specific legal concepts. Some, for example, have criticised the concept of democracy, arguing that it is based on an inaccurate description of how people make decisions in the political context (they are much less selfish, rational and knowledgeable than we think) (BRENNAN 2016). Others have criticised the concept of criminal responsibility showing how it is rooted in moral intuitions that tend to disappear when we are exposed to a scientific explanation of the real psychological roots of crime (when we learn more about neuroscience we tend to be suspicious about the notion of free will and retribution and tend to find consequentialist theories of punishment more plausible) (SIFFERD 2004, SIFFERD 2006). Others still have criticised the concept of a human right, showing that talk of human rights can be “debunked” (talking of human rights is just a way to justify *ex post facto* intuitions that are independent from any relation with what we believe should be the sources of rights) (BUBLITZ 2021). A similar argument has been made with respect to the concepts of legal interpretation and

empirical generalizations, and hence that there is no such theory as folk psychology» (AUDI 2015). The first conception of folk psychology is sometimes referred to as the theory-theory of folk psychology and I will somehow subscribe to it when I will speak of cognitive perfectionism as a set of assumptions that we adopt to predict what both other people and ourselves can be expected to process information. See HUTTO & RAVENSCROFT 2021. This dominant view is sometimes referred to as the theory-theory of folk psychology and I will somehow subscribe to it when I will speak of cognitive perfectionism as a set of assumptions that we adopt to predict what both other people and ourselves can be expected to process information.

evidence (both of which have been described as ways of rationalising and making socially presentable insights causally independent of the premises that interpretive and evidential arguments should formally have) (HAIDT 2013). Other authors have attempted a more far-reaching operation by discussing in more general terms the relationship that exists or should exist between folk psychology and law (BRIGAGLIA 2015, HAGE 2021, TOBIA 2021, KUREK 2021).

In this article, I do not intend to discuss specific folk-psychological concepts adopted by law, nor the relationship between folk-psychology and law in general. Rather, I want to discuss a subset of characteristics that folk psychology ascribes to individuals and that I believe have profound implications for legal practice. Folk psychology gives us a distorted image of our ability to accumulate knowledge and process it rationally: it ignores the existence of a division of cognitive labour and thinks of individuals as cognitively perfect agents. I am calling this set of folk psychological assumptions “cognitive perfectionism”. Agents are thought as “perfect” in the etymological sense of the word. “Per-fectus” in Latin means accomplished, complete, finished, and that is how we tend to think of our cognitive processes: as mechanisms accomplished in themselves, capable of functioning in relative isolation. We tend to think of the individual mind as capable of rationality and knowledge even if it is isolated from the physical and social context in which it evolved, whereas the cognitive processes that take place in our individual brains are better thought of as portions of broader, shared cognitive processes in which the ideals of rationality and knowledge can be realised. In particular, we think of individuals as capable of autonomous propositional knowledge, autonomous conceptual knowledge and perfect individual rationality. I will examine these three aspects separately, to make three points that can be summarised with three slogans: 1. *we know less than we think we know*, 2. *we master less concepts than we think we master*, 3. *we think less than we think we think*.

### 1.1. *Autonomous propositional knowledge*

I would like to start inviting the reader to make a little experiment. Please take a piece of paper and draw a bicycle. You don’t need to be overly accurate. Just make sure to describe graphically, to the best of your understanding, how the bicycle works. Please don’t look at pictures of bicycles on your phone. Just rely on your personal, individual knowledge. You can stop reading here: resume the reading once your drawing is complete...

So, do you know how a bicycle works? If you are like most people before this simple exercise, you *thought* you knew, but the attempt to draw one may have made you realise that your knowledge is far from accurate. In a 2006 experiment, a psychologist from the University of Liverpool, called Rebecca Lawson, asked subjects who claimed they understood well the functioning of bikes to complete a very simple drawing of one, and the results were quite comical. About half of the subjects, even some who used bikes every day, were unable to correctly represent how motion is transmitted from the pedals to the wheels via the chain (LAWSON 2006). An artist called Gianluca Gimini, independently from Lawson, had noticed this mismatch between how much we think we know about bikes and how much we actually know. He took some drawings of dysfunctional bikes, very similar to those produced by Lawson’s subject and built them exactly as they were represented. Gilmini’s work is a vivid representation of a key idea I would like to discuss here: *illusion of explanatory depth*. This is a metacognitive illusion: it is a proclivity to form false beliefs about the quality and nature of our own and other people’s beliefs. We tend to greatly underestimate our reliance on other people’s expertise. We fail to recognise how our commitment to the truth of even the most basic propositions is based on other people’s commitment. We fail to recognise our inability to justify what we say and believe or even, as we will see in the next paragraph, our inability to identify the very content of the concepts we use. This is because information and evidence always feels “within reach” (ROZENBLIT & KEIL 2002). Our cognitive processes, as well as our behaviours, are so well functionally integrated with our social and technological environment, that we don’t really need to draw a line between

what we individually know and what others know (CLARK & CHALMERS, 1998). Maybe I don't know my way home but the fact I can always rely on Google makes me feel as if I did (ELISEEV & MARSH 2023). Maybe I don't know exactly what the "carbon tax" is but the fact that a journalist I trust supports it makes me feel I also understand why it is a good thing.

This tendency to defer depends on the fact that our brain is in a sense a utilitarian. It does not perform a task if that task costs intellectual resources without producing equivalent intellectual profit. As Daniel Kahnemann puts it,

«A general "law of least effort" applies to cognitive as well as physical exertion. The law asserts that if there are several ways of achieving the same goal, people will eventually gravitate to the least demanding course of action. In the economy of action, effort is a cost, and the acquisition of skill is driven by the balance of benefits and costs. Laziness is built deep into our nature. Generally, this means that when a cognitive task can be outsourced to our social or physical environment, our brain will outsource it. If I can form reliable beliefs about my way home deferring to my phone rather than to my own memory I will tend to do so» (KAHNEMAN 2011, 33).

Experiments along the same lines as Lawson's have also been run about the understanding of institutional policies, and the results were similar. Subjects holding strong views about policies regarding complex issues such as climate change were asked to explain them, and this had two effects. First, the request undermined the subject's belief that they understood the issue at hand: when attempting to provide an explanation, subjects realised they didn't really know that much; second, the request lead people to express more moderate views. While subsequent experiments failed to reproduce the second effect, the first one was confirmed. The request for an explanation reduces the people's belief that they understand.

According to cognitive scientists Sloman and Fernbach, we are often prey to an illusion of "explanatory depth": We *think* we know how the world around us works, but we don't. They give the example of toilets:

«Take a minute and try to explain what happens when you flush a toilet. Do you even know the general principle that governs its operation? It turns out that most people don't. [...] Its most important components are a tank, a bowl, and a trapway. The trapway is usually S- or U-shaped and curves up higher than the outlet of the bowl before descending into a drainpipe that eventually feeds the sewer. The tank is initially full of water.

When the toilet is flushed, the water flows from the tank quickly into the bowl, raising the water level above the highest curve of the trapway. This purges the trapway of air, filling it with water. As soon as the trapway fills, the magic occurs: A siphon effect is created that sucks the water out of the bowl and sends it through the trapway down the drain. It is the same siphon action that you can use to steal gasoline out of a car by placing one end in the tank and sucking on the other end. The siphon action stops when the water level in the bowl is lower than the first bend of the trapway, allowing air to interrupt the process. Once the water in the bowl has been siphoned away, water is pumped back up into the tank to wait for next time. It is quite an elegant mechanical process, requiring only minimal effort by the user. Is it simple? Well, it is simple enough to describe in a paragraph but not so simple that everyone understands it. In fact, you are now one of the few people who do» (SLOMAN & FERNBACH, 2018, 14 ff).

Even the simplest objects require complex networks of people with different expertise to be produced and function. No one is an expert of all aspects of a given problem. In almost everything, we rely on other people's expertise.

«Our point is not that people are ignorant. It's that people are more ignorant than they think they are. We all suffer, to a greater or lesser extent, from an illusion of understanding, an illusion that we understand

how things work when in fact our understanding is meager» (SLOMAN & FERNBACH 2018, 12).

Sloman, along with others, has further investigated this topic experimentally by developing what they call «the community of knowledge hypothesis». The community of knowledge hypothesis is the idea that we fail to distinguish our own knowledge from other people's knowledge. We think we understand a topic, but this confidence is derived from the fact that we can rely on others to make statements or perform actions related to that topic. Sloman and Rabb tested this hypothesis by conducting a series of experiments in which they asked participants to rate their own understanding of novel natural phenomena. The experiments showed that people's perception of understanding is increased when they were told that experts could fully explain the phenomenon and that explanation was public and accessible (SLOMAN & RABB 2016). Similar effects have been found in relation to understanding of policies (RABB et al. 2021). Rabb, Fernbach and Sloman argue that knowledge is collective in two senses: not only in the obvious sense that it is acquired through testimony, but also because it is stored outside of our heads and processed through the help of others: «individuals retain detailed causal information for a few domains and coarse causal models embedding markers indicating that these details are available elsewhere (others' heads or the physical world) for most domains» (RABB et al. 2019, 821).

It is as if each of us was a computer connected to the internet. We keep most of our files in the cloud (in the community of knowledge) and we download them to our heads only when and only in the limited measure in which this is necessary to us. And, in this process, we don't have a clear perception of what files are in the cloud and what would be accessible also off-line. This is reflected in our understanding of concepts, as we will see in the next section. People confuse their own ability to distinguish subtle differences of word meanings with the knowledge of how to access those meanings through other people<sup>6</sup>.

## 1.2. *Autonomous conceptual knowledge*

There is then a mismatch between our naive way of understanding how knowledge is produced and stored and the real way it is produced and stored. A great deal of philosophical work has been done to demonstrate this mismatch. However, although the issue of relying on others' testimony to form our beliefs has been a topic of discussion since the era of David Hume and Thomas Reid, contemporary philosophical literature since the 1970s has highlighted an additional, deeper dimension of our dependence on the knowledge of trusted individuals. There are two ways in which our knowledge can be said to depend on the knowledge of others: one has to do with the commitment to the truth of propositions<sup>7</sup>, and the other has to do with the structure of the concepts we use to think<sup>8</sup>. We rely on others not only to determine which propositions to believe (epistemic deference), but also to determine the conceptual content of our own beliefs (semantic deference). Our illusion of explanatory depth therefore consists not only in deluding ourselves that we autonomously know the reasons behind our beliefs, but also that we have autonomous access to the conceptual content expressed by words we use every day (KOMINSKY & KEIL 2014). This distinction can be illustrated with an example<sup>9</sup>.

<sup>6</sup> KEIL 2005, KEIL et al. 2008, KOMINSKY & KEIL 2014, KEIL & KOMINSKY 2015.

<sup>7</sup> On epistemic deference, that is on testimony as a source of knowledge, see for example: ADLER 2012, HARDWIG 1985, HARDWIG 1991, COADY 1994a, COADY 1994b, GOLDMAN 1999, GOLDMAN 2011, GALLAGHER 2013.

<sup>8</sup> On semantic deference see SPERBER 1985, 54 ff., MARCONI 1997, RECANATI 1997, RECANATI 2000, 261 ff., DE BRABANTER 2006, DE BRABANTER et al. 2007, SHEA 2018. Also see the related literature on semantic externalism and two dimensionalism: KRIPKE 1980, PUTNAM 1975, BURGE 1979, CHALMERS 2002, CHALMERS 2003.

<sup>9</sup> In this example I will continue to use the typical language of folk psychology and in particular I will refer to the folk-psychological notion of belief: however, I will modify this notion in such a way as to make it compatible with the existence of a division of cognitive labour in the processing of concepts.

Imagine you go to the doctor and you are diagnosed with arthritis. The diagnosis is likely to produce in you the belief that you probably have a condition called “arthritis”. If you trust your doctor and you are as most people this belief will be deferential in both ways I mentioned. First: your commitment to the truth of the proposition that you have arthritis will depend on the doctor’s commitment. You will not understand and scrutinise all of the medical reasons that lead the doctor to believe that you have arthritis. Your reason for believing that you have arthritis will be the fact that your doctor believes it. If you were to learn your belief about the doctor’s belief is wrong, you will have a reason to amend also your belief about arthritis. In this sense, your belief would be *epistemically deferential*. Second: you don’t really know what the word “arthritis” means. You couldn’t tell if “arthritis” is just a type of “arthrosis” or “arthrosis” a type of “arthritis”. You don’t possess the necessary conceptual competence to identify what exactly the word refers to. This means that not only don’t you know how to justify individually the statement that you have arthritis but don’t even know what are the truth conditions that that statement is supposed to represent. In your idiolect, the word “arthritis” essentially means something like “whatever disease the community of doctors calls ‘arthritis’”. Your very concept of “arthritis” is deferential. It has the same referent of the doctors’ technical concept: it represents the same thing. But it has a different sense: the doctor’s criteria to determine whether something is arthritis and your criteria are different<sup>10</sup>. The doctor relies on technical criteria, you rely on metalinguistic criteria. For the doctor the fact that makes a condition “arthritis” is that it is associated with certain symptoms, causes and consequences, for you it is the fact that doctors call it “arthritis” and identify it as such. In this sense, your belief that you have arthritis would be semantically deferential.

Except in the rare cases in which *we* are the experts, our beliefs are not transparent to us. They are deferential in these two senses. Both type of deference are justified by what we have called the law of least effort. Assessing the truth of propositions individually and using transparent (i.e. not deferential or opaque) concepts is often uselessly effortful. Deference allows us to obtain the same intellectual and practical profit, while minimising intellectual and practical costs. Given time and ability constraints, relying on the doctor’s credentials and reputation is arguably the most efficient strategy to determine the truth value of the proposition that you have arthritis (as opposed to trying to acquire an expertise in rheumatology of your own). And even if you don’t know the *technical concept* of arthritis, knowing the *word* “arthritis” is enough for you to go to the pharmacy and successfully ask for the medicines you need.

### 1.3. Perfect individual rationality

Not only do we need others to have access to propositional and conceptual information, we need others also to process that information and make decisions. In the last sixty years, cognitive psychology has more and more convincingly shown that, *pace* Aristotle, humans are not rational animals (KAHNEMAN 1994, STICH 1990). Individuals are quite bad at basic logic (EVANS 2002), probability (KAHNEMAN & TVERSKY 1972. TVERSKY & KAHNEMAN 1983), and rational decision-making (KAHNEMAN et al. 1982). We often take mental shortcuts that save us from wasting energy making autonomous decisions using the rules of logic. And these shortcuts often consist of relying on others: we rely on others to decide whether an inference is valid or not. Judges, who often consider themselves autonomous rational thinkers, are not exempt from this. Consider this quote from Judge Hutchinson, explaining how he reaches a solution in complex cases:

«[W]hen the case is difficult or involved, and turns upon a hairsbreadth of law or of fact [...] I, after

<sup>10</sup> Sense and reference are two possible meanings of “meaning”. The “sense” of a word is its mode of presentation, the way it presents what it stands for, its reference.



canvassing all the available material at my command, and duly cogitating upon it, give my imagination play, and brooding over the cause, wait for the feeling, the hunch—that intuitive flash of understanding which makes the jump-spark connection between question and decision, and at the point where the path is darkest for the judicial feet, sheds its light along the way»<sup>11</sup>.

Where do these “judicial hunches” come from? Are they the result of unconscious legal syllogisms made by judges on the basis of their extensive knowledge of the law, which merely anticipate what will be made explicit in the judicial decision? Or are hunches selecting the solution to the case in some other non-logically justified way? Various strands of studies in cognitive science suggest that the latter may be the case. The way judges publicly justify their decisions often doesn’t have much to do with the way they reached them in the first place.

An interesting study of bail decisions in the UK shows that judicial hunches may simply be the result of social influence: by default, judges decide based on how other legal officials they trust have previously decided or treated the same case. In bail decisions, judges are supposed to decide whether to grant the defendant unconditional bail or impose a sentence such as imprisonment on the basis of the defendant’s character, trustworthiness to appear in court, not tampering with witnesses and not committing further offences. However, this study of two London courts (Court A and Court B) suggests that judges often base their decisions not on the law and the facts of the case, but on decisions previously made by the police, the Crown Prosecution Service and other judges. The study found that the average time spent by each judge on each case was less than 10 minutes. 95% of bail decisions in Court A were made using a fast and frugal heuristic based on 1) whether the prosecution had requested conditional bail, 2) whether a previous court had imposed conditions, 3) whether the police had imposed conditions or remanded the defendant in custody. Bail decisions in Court B followed a similar heuristic.

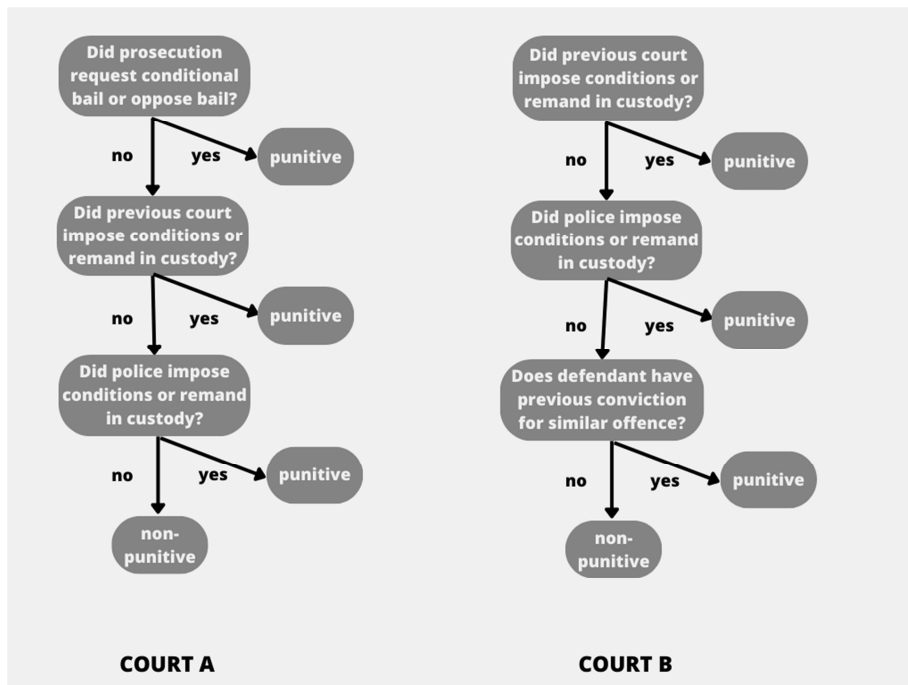


FIGURE 1. This diagram is taken from GIGERENZER 2008, which in turn is an adapted version of the diagram in the original published study, DHAMI 2003.

<sup>11</sup> Quoted in HAIDT 2013, 868.

According to the social psychologist Johnathan Haidt, the process of judicial decision-making reflects our general way of dealing with moral and practical issues, which is governed much more by intuitions of social origin than by logic. Haidt describes this process with the diagram reproduced in Figure 2, where A and B represent two different people, the circles represent different stages of their thinking, and the lines represent the causal links that may exist between these stages.

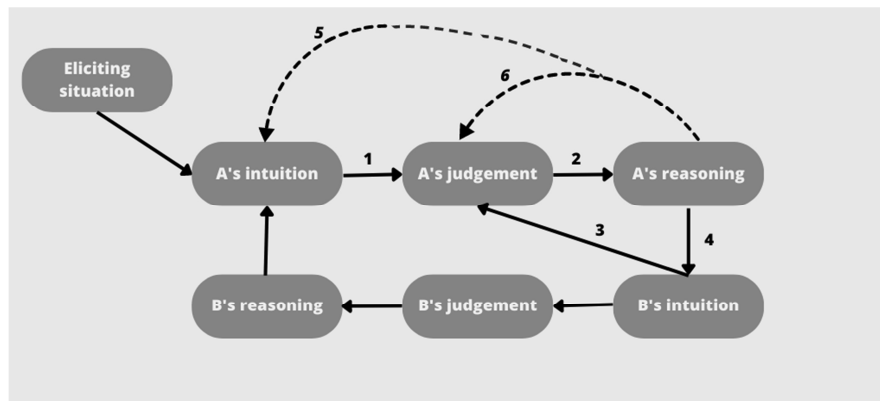


FIGURE 2. The social intuitionist model of moral judgment, taken from HAIDT 2001.

The non-dotted lines indicate the *most usual* causal links: 1. Our intuitions usually cause our judgement; 2. Our judgement usually causes our (post hoc) reasoning; 3. Our judgement usually causes other people's intuitions to change; 4. Our (post hoc) reasoning also usually causes other people's intuitions to change. The dotted lines indicate *rare* causal links: 5. Our private reasoning rarely causes a change in our own intuitions; 6. Our private reasoning rarely causes a change in our judgement (HAIDT 2001, 815). So, according to this model, when a judge decides a case, his or her decision is *not* usually caused by a careful examination of the facts of the case and the applicable legal rules. What happens is that the judge has an unconscious intuition that leads him or her to adopt a certain hypothesis for a solution. Having reached a solution, the judge looks for facts and rules to justify it. But where does the initial unconscious intuition come from? Haidt's hypothesis is that the origin of intuition is at least partly social: we tend to align our judgement with the judgements of other people on the same issue.

This however is not always the case. When a piece of information coming from others conflicts with some of our pre-existing beliefs we often tend to disregard it. Confirmation bias is probably one of the best known and explained cognitive biases. It consists of the tendency of people to seek out, interpret and remember information in a way that confirms their pre-existing beliefs or hypotheses, while ignoring or discounting evidence that contradicts them. On the face of it, this mix of initial credulity and subsequent confirmation bias may have perverse consequences for the functioning of, for example, the criminal justice system. A prosecutor will tend to readily endorse an investigative hypothesis that does not conflict with his or her prior beliefs. In particular, he or she will tend to believe the testimony of the first witnesses interviewed. Once this hypothesis is established, however, he or she will do everything possible to confirm it by seeking additional evidence in its favour. Once the prosecutor has prosecuted, the judge will also tend to consider the case on the assumption that the investigative hypothesis is well-founded, contrary to the presumption of innocence (*in dubio pro reo*).

Although what I have said so far paints a rather discouraging picture of the human capacity to make good decisions, let alone to make a legal system work rationally, things may not be as bad as one might think. According to Hugo Mercier and Dan Sperber (MERCIER & SPERBER

2011, MERCIER & SPERBER 2017, MERCIER 2020), many behaviours that may seem dysfunctional when viewed at an individual level are actually quite functional when viewed from the perspective of the larger human community. According to the argumentative theory of reason, the theory developed by these two authors, our tendency to prefer evidence that confirms our pre-existing beliefs and ignore evidence that contradicts them, for example, stems from our evolutionarily developed ability to make the best possible case for a certain thesis, which in turn contributes to a greater efficiency.

According to Sperber and Mercier, our tendency to favour evidence that confirms our existing beliefs and ignore evidence that contradicts them suggests that our reasoning skills have evolved to persuade others and take sides in debates, rather than to prioritise our own accuracy and truth. Paradoxical as this may seem, confirmation bias is a more evolutionarily successful trait of the tendency to seek the truth in an unbiased and disinterested manner. Human communities that sought knowledge by dividing their cognitive labour into biased teams, favouring opposing theories and unwilling to abandon their thesis except with overwhelming arguments, proved evolutionarily more successful than communities formed by unbiased individuals genuinely interested in the search for truth. Individual irrationality produces collective rationality.

The division of labour in the exercise of rationality leads to resource savings, just as it does in various other aspects of life. The adversarial trial is a good example of this phenomenon. Each party in an adversarial trial has a bias towards their own position and a desire to win the case. This bias motivates them to carefully select and present evidence that supports their position and to challenge evidence presented by the opposing party. According to Sperber and Mercier's theory, this process of adversarial argument, in which both sides present their best arguments and evidence, can actually lead to more accurate and informed decisions by the judge. The process of adversarial argument allows for a full and thorough examination of the evidence, with each party scrutinising the other's evidence and arguments for weaknesses and flaws. In this way, the parties act as checks and balances on each other, ensuring that all relevant information is presented and evaluated by the judge. This process can help to mitigate the effects of individual bias by providing multiple perspectives on the evidence and arguments. In addition, the presence of a neutral third party (the judge) who is not invested in either side's position further contributes to the overall rationality of the process. In brief, even if confirmation bias can distort evaluations and attitudes and perpetuate false beliefs at the individual level, it can produce a division of epistemic roles that results in greater rationality at the collective level.

## 2. Cognitive perfectionism in law: three legal myths

The dramatic mismatch between our folk-psychological assumptions and the division of cognitive labour described in the previous section has a profound impact on legal practice. In this section, we will deal with cognitive perfectionism in law. The cognitive perfectionism of a norm or institution can be diagnosed by looking at its *ratio legis*, that is the official purpose that is believed to justify that norm or institution. We can say that a rule or institution is cognitively perfectionist if the result the legislator or the legal community intends it to achieve would only be achieved by it if the agents addressed were cognitively perfect, or at least endowed with rationality or knowledge far beyond the actual. For example, a norm is cognitively perfectionist if it assigns the right, duty, power, responsibility, etc. to  $\phi$ , and  $\phi$  is an action that a normal human being is incapable of performing due to his limited capacity to be rational or to accumulate and process knowledge. More generally the rule or institution is cognitively perfectionist if it assigns legal positions with respect to behaviours that can only be performed by unrealistically rational or knowledgeable agents.

There are two forms or two aspects of cognitive perfectionism. We can call them *rationality perfectionism* and *knowledge perfectionism*. Rationality perfectionism is the false assumption that agents

are capable of perfect individual rationality, whereas knowledge perfectionism is the false assumption that agents are individually capable of acquiring and processing unlimited or at least extremely large amounts of information. While rationality perfectionism is the aspect that has received the most attention in legal scholarship, knowledge perfectionism is a relatively neglected topic.

The idea that sanctions are the best way to prevent violations of the law is rationality perfectionist. It presupposes that violations (or non-violations) are ordinarily the result of a rational cost-benefit analysis. This idea has been criticised mainly by an extremely influential theory developed by Cass Sunstein and Richard Thaler on the basis of Herbert Simon's theory of bounded rationality (SIMON 1955), the work of Kahneman and Tversky on heuristics and biases (KAHNEMAN 2003, KAHNEMAN 2011), and the nascent behavioural economics (TEICHMAN & ZAMIR 2014). According to Sunstein and Thaler, traditional legal norms systematically fail to motivate their recipients because they erroneously assume their perfect rationality. According to them, legal norms traditionally set out to motivate recipients with rewards and sanctions, postulating that they in all aspects of life (from business to crime, from family life to interaction with the public administration) decide on the basis of a rational cost-benefit calculation. The fact that real agents tend to be irrational therefore renders law ineffective. Alternatively, Sunstein and Thaler propose techniques for influencing citizens that are based on their irrationality, which they call "nudges". Nudges focus on influencing individuals based on the emotional, automatic, and unconscious mechanisms of the human mind (often referred to as "System 1" thinking), rather than relying solely on conscious, rational deliberation, which requires effort and is less frequently activated (referred to as "System 2" thinking)<sup>12</sup>. An example of a nudge is the modification of organ donation legislation from an opt-in system, where explicit consent is required for donation, to an opt-out system, where explicit dissent is necessary to avoid donation. Traditional legislators may assume that this change would have no impact, as they assume the addressees of norms to act as "*homines oeconomici*", and thus not to be influenced the status quo bias. However, a legislator well-versed in psychology knows that "choice architecture" plays a crucial role in shaping outcomes. Most agents will not activate their rationality (their System 2) to determine the fate of their organs. Guided by their intuitive autopilot (their System 1), they will simply not choose and accept the default option.

The literature has extensively explored the problem of legislators placing unwarranted trust in the rationality of individuals, but no comparable attention has been paid to the unwarranted trust placed in people's ability to individually process large amounts of knowledge. Knowledge perfectionism deserves to be examined separately because, as we shall see by discussing a few examples, it has effects independent of rationality perfectionism. In what follows I will provide three examples of the consequences of cognitive perfectionism in law, three legal myths, so to speak: The myth of legality, the myth of consent and the myth of the judge as gatekeeper. In discussing these examples, I will attempt to emphasise the aspects of knowledge perfectionism rather than those of rationality perfectionism, as I believe that the former, which the literature has neglected, may be of greater interest to the reader than the latter.

I use the word myths rather than legal fictions because the term "legal fiction" is usually employed to refer to descriptions of reality that legal practice explicitly treats as true, even though the agents involved in the practice know that they are not true (DEL MAR 2015). What I want to talk about are false representations of reality that are presupposed by practice and that agents often take to be true. An example of legal fiction is the idea that a corporation is a person. An example of a myth in the sense I mean is the mediaeval idea that God gave the emperor his legitimacy to rule. The ones I will discuss are myths and not fictions as they are not normally recognised as false by legal actors.

<sup>12</sup> THALER & SUNSTEIN 2003, THALER & SUNSTEIN 2008, SUNSTEIN 2011, SUNSTEIN 2013a, SUNSTEIN 2013b, THALER et al. 2013, SUNSTEIN 2014, SUNSTEIN 2015, SUNSTEIN 2017.

### 2.1. *The myth of legality* (ignorantia legis non excusat)

The first myth I would like to talk about to exemplify cognitive perfectionism is the very idea of legality. Our naive understanding of how legality works is associated with a specific folk psychological way of describing the relation between the contents of a legal system and the mental states of the community living under it. It is the view according to which the contents of a legal system correspond to mental representations which are shared by both citizens and legal officials.

This idea is well captured by John Searle's description of institutional reality<sup>13</sup>. According to Searle, human beings *constitute* institutional entities, including legal ones (such as valid contracts, laws and nation states) by collectively accepting them as existent. Institutions are identified by what Searle calls their *status functions*, which are functions they perform in virtue of being collectively mentally represented as having a certain status. In everyday life, we interact with all kinds of objects or people that we value in virtue of some kind of *function* they perform in society. Many times, the function is performed thanks to the physical structure or properties of the object or the intrinsic features or abilities of the person. Take the example of cars, hammers or pencils, on the one hand, or physicians, construction workers and janitors, on the other. But, according to Searle, there are other equally important entities that play equally important roles in our lives which perform their functions merely in virtue of being collectively recognised, through constitutive rules, as having a certain status. Law and all legal entities belong to this second category. Searle's favourite example is money. If we had a collective amnesia and we all forgot that the pieces of paper we have in our wallets are legally valid money, these would instantaneously cease to *function as* money. They wouldn't work anymore as means of exchange or as a reserve of economic value. They would cease to have all the interesting properties that normal pieces of paper which are not money lack. The same is true for contracts, nation states, university departments, as well as presidents, judges, and policemen. The key social functions of all these entities are performed only in virtue of the collective recognition of the status that society at large represents them as having.

Although Searle's theory describes our relationship with institutional reality in a sufficiently convincing manner, it totally overlooks the importance of the division of cognitive labour in the mental representation of legal concepts (ROVERSI et al. 2023). Institutional entities such as loan contracts, presidents, judges, etc. exist even though only an extremely small minority of individuals in the community have access to the constitutive rules of the corresponding status functions. What is important and problematic for our purposes is that, according to this view, the physiological functioning of a legal system presupposes that the members of the community governed by it can have shared mental representations of the *same* legal content. This idea, even if not necessarily with the analytical sophistications of Searle's terminology, tends to be presupposed by lawyers, when it comes to defining the ideal of the rule of law.

The idea of the rule of law is often traced back to Aristotle's *Politics*, where he discusses the problem of whether it is better to be ruled by men or by laws. His answer is that «it is proper for the laws good when rightly laid down to be sovereign, while the ruler or rulers in office should have supreme powers over matters as to which the laws are quite unable to pronounce with precision because of the difficulty of making a general rule to cover all cases» (ARISTOTLE 1932, 1282b; cf. WALDRON 2016). Since Aristotle, two main advantages of rule of law over rule of men have been traditionally pointed out. The first is that if a rule pre-exists the case to be settled, the decision over its regulation will be less likely to be arbitrary: it will more likely be

<sup>13</sup> SEARLE 1997, SEARLE 2010. Hart more realistically believes 1) that only a very small subset of the normative material that forms a legal system is the object of shared knowledge (the rule of recognition), 2) that the repositories of this shared knowledge are only a rather small subset of citizens (mainly legal officials) (HART 2012, 100 ff.). For a comparison between Searle and Hart on this point see ROVERSI et al. 2023.

based on reason and equality rather than extemporary whim or selfish desires or discriminatory preferences of the rulers. The second reason is that people will be able to conform to what the rule requires before the case regulated by it occurs. To put it differently, the rule of law can be seen as promoting two main complementary goods, or as having two main functions, one that we might call an *epistemic function* (communicating to citizens what is required of them) and one that we might call a *control function* (preventing officials from exercising arbitrary power in the service of their own interests rather than the general interest). The two functions can be conceptually separated (ENDICOTT 1999; FLETCHER 1998, 207). We could imagine a legal system that is perfectly capable of protecting citizens from the arbitrary decisions of officials, where decisions are made by tossing coins: in this case, the rule of law's control function would be protected, but not its epistemic function. On the other hand, one could imagine a legal system in which officials have private, selfish interests that they pursue in a constantly predictable way: in this system, their decisions would be perfectly predictable by citizens, but this would obviously not protect them from arbitrary government.

The stress on the epistemic function of the rule of law and the assumption that the two functions are somehow inseparable from each other and mutually supportive is arguably knowledge perfectionist. It assumes that control over the work of government should be carried out "from below" without considering the hypothesis that the control function could be better achieved through other forms of institutional design. Both advantages are predicated on the alleged informational consequences of regulating society with public, standing rules rather than case-by-case decrees. The rule of law creates an informational asymmetry, *blinding* the rulers and making us citizens able to *see* and determine how public action will affect our lives. It prevents the rulers and allows citizens to see the future. When I decide to violate a smoking ban, I can *know* the practical consequences that will follow, for instance that I will have a legal obligation to pay a 100 euro fine. The legislator (the creator of the smoking ban) on the other hand was *not* able to *know* that I, or any other specific person, would have to pay 100 euro. Standing public rules, unlike case-by-case decrees of the rulers, make the conditions of their application explicit beforehand. This prevents rulers from predicting who will profit or benefit from public action. At the same time, it allows us citizens to predict public action, criticise it based on the law, criticise the law itself, and finally act strategically based on our knowledge of the possible legal consequences of our actions. Under the rule of law, if I act unlawfully, I *know* (or I am at least able to know) that I do and what the possible consequences of this will be, and I *know* (or I am at least able to know) what it would take to avoid illegality and its consequences. All of this is accompanied by the idea that ignorance of the law does not excuse, that is, that everyone is burdened with the onus of knowing the law.

This account of the good that the rule of law is supposed to secure is characterised by knowledge perfectionism in two respects. First, because the epistemic function of the rule of law cannot realistically be realised in the way I have just described. None of us can know all the laws of a legal system in detail, not even if we activate our System 2, not even if we study all our lives to achieve this goal. Not only that, no one who has come to a certain legal conclusion with respect to a specific legal question can exclude that the conclusion he or she has come to is erroneous. This is because law is always defeasible and every legal conclusion based on a certain set of premises can change if a further premise is added to that set. And the possibility that a further premise may have to be added can never be ruled out since no one ever has complete knowledge of the sources of law of a certain legal system. Second, it is by no means certain that the pursuit of the epistemic function contributes to the realisation of the control function. The control function rule of law requires a multitude of highly specific laws, drafted in a technical manner, and subject to interpretation by expert jurists organised in communities that ensure mutual accountability (cf. AINIS 2002, 137; COLEMAN 1998). On the contrary, the epistemic function calls for a limited number of laws, characterised by simplicity and approximation, easily understandable by all.

## 2.2. *The myth of consent* (volenti non fit iniuria)

A second myth, relevant to all areas of law, is the myth of consent, i.e. the idea that a manifestation of our will is sufficient to adequately represent our interests and is proof that we have accepted the consequences to which we have declared our consent. Just consider for example the last time you expressed a legally valid consent on the internet. This was probably the last time you clicked “I accept” on some cookie policy on your phone. All websites owned in the EU, or targeted towards EU citizens, are now expected to comply with a law that requires them to ask for permission to use cookies. The idea behind the law is that the best way to protect citizens is to appeal to their rational faculties and inform them of what will happen to their data. The law seems to presuppose that if citizens accept the websites’ cookie policy, they will have understood, rationally assessed what is in their best interest and accepted the terms and conditions. The law somehow seems to presuppose that the fact of clicking that button is sufficient evidence that the clicker has been informed of the legal consequences that will follow for the act of clicking. This is so even in cases where the amount of information to which one is “consenting” spans thousands of pages written in legalese that only a lawyer with a background in IT could reasonably understand. You are probably all familiar with this cookie law. If a website receives visitors from within the European Union, the *ePrivacy Directive* (EU cookie law) requires that it can only use cookies and trackers with their explicit consent. This is why every day, several times a day, you click ‘I accept to allow cookies to be downloaded onto your device (phone, tablet or computer). However, it is likely that many of you do not know exactly what a cookie is or what it is used for.

The purpose (the *ratio legis*) of requiring consent is clearly protecting the consenting party. But in most cases consent (or dissent) cannot but be blind. Most of us would probably feel safer if the terms and conditions were approved by some kind of third-party expert body we can trust. The expectation that we are all-knowing beings thus leads the law to select a suboptimal strategy to protect our interests. This is a good example of how knowledge perfectionism in law would be capable of harming us even if we were *homines oeconomici*. Even when we are able to keep our System 2 active, we are often unable to match the model agent that law presupposes. For example, even if I were perfectly rational, this would not help me in understanding 200 pages of terms and conditions written in IT legalese. It would actually be irrational for me to acquire all the information necessary to understand it. The cost of understanding the cookie policy is higher than the expected utility derived from understanding it (STRAHILEVITZ & KUGLER 2016, MCDONALD & CRANOR 2008, REIDENBERG et al. 2014).

The myth of consent manifests itself in many aspects of legal practice, particularly in contract law, but it is precisely in the context of regulating our online lives that it risks producing the most damage in the near future<sup>14</sup>. This is because the digital services we use on a daily basis and blindly consent to without regard to the consequences<sup>15</sup> are increasingly the same tools through which we see and interpret the reality<sup>16</sup> we use to make decisions in our economic, political and personal lives. Although the Internet is fundamental to our lives, we do not always think about the kind of economic transaction we are involved in every time we consume it. While we are all aware of who pays for the service we receive when we go to a restaurant or a public library this is not so clear when we are on

<sup>14</sup> The reflections in the following pages on the power of influence that underlies the Internet economy are partly taken from an unpublished paper written with Marta Taroni: TARONI & UBERTONE 2021.

<sup>15</sup> Consent to the terms and conditions of online services is often extorted by providers using manipulative techniques based on biases called dark patterns, see KOCYIGIT et al. 2022.

<sup>16</sup> We increasingly perceive reality through the perspective of (often politically polarising) “filter bubbles” that are theoretically tailored to our “interests”, but which are actually designed not to maximise our ability to understand, but to maximise our engagement with platforms and our consumption.

Google, Instagram, Twitter, TikTok, Facebook, Tinder, Grindr, Snapchat, LinkedIn, or YouTube. We pay for the restaurant, our taxes pay for the public library but who pays for services provided by the web giants we interact with every day? Although we use the internet far more often than we go to restaurants or libraries, only a minority of us can give a comprehensive answer to this simple question (although a clear answer to this question can be deduced from the terms of the contracts to which we are supposed to be parties). The answer in a nutshell is the following. Economic actors operating in the digital sector collect data about us: some of this data is used to improve products and services, while other is processed to obtain predictive algorithms, i.e. algorithms capable of predicting people's behaviour. By extracting behavioural data and profiling individuals, it is possible to target consumers with the right stimulus at the right time to induce behaviour that will benefit the platform and advertisers. A critical factor in the functioning of this industry is the use of behavioural psychology techniques to induce users to 1) devote as much time and attention as possible to the content proposed by the platforms (maximisation of time on screen); 2) provide (more) data about themselves; 3) purchase the goods or services proposed by the advertisers; 4) generally, behave online and offline, either by action or omission, in accordance with the behaviour desired by the advertisers or the platform. According to Shoshana Zuboff, those who claim that in the Internet economy the product "is us" are wrong. We, the users and consumers, are the means to obtain the predictive products and tools for large-scale manipulation (ZUBOFF 2019). These are then used to induce us to buy certain products and services or in some cases (think of the Cambridge Analytica scandal) to influence the exercise of our political rights, such as the right to vote.

### 2.3. *The myth of the judge as "gatekeeper" (iudex peritus peritorum)*

The final myth I would like to cite as an example of cognitive perfectionism in law relates to a more specific topic than the previous two: the use of science and expert testimony in the context of the courtroom<sup>17</sup>. According to evidence scholar Ronald Allen, there are two possible models of expert evidence: a deferential model and an educational model (ALLEN & MILLER 1993, ALLEN 2018). According to the deferential model, judges can limit themselves to verifying that the people called upon to testify as expert have sufficient credentials, have no conflict of interest and their theories are accepted by the scientific community. According to the educational model, fact-finders will be allowed to accept the content of the expert testimony as true just on the basis of credentials, and even if they do not understand the scientific reasons that support it. According to the educational model, on the contrary, judges must be educated by experts in order to critically scrutinise the basis of the experts' opinions. The judge should be a "gatekeeper", invested with the mission to keep "junk science" out of the courtroom. When admitting evidence, the judge should always verify that the expert opinion supports fact-finding with substantial argument, not based on the mere authority of the expert and comprehensible to an ordinary person. According to this model, fact-finders, when assessing the evidence, must be educated by the expert, must understand the reasoning and theories underlying the expert's statements, and should disregard any appeal to authority. Throughout the twentieth century - but especially since the 1990s, following the famous US case of *Daubert v. Merrell Dow Pharmaceuticals* - the educational model has become dominant in both scholarship and jurisprudence (TARUFFO 2016, 337-339). Some have even argued that there is a need to invest in training judges in non-legal subjects so that they are able to scrutinise expert evidence without falling into a form of blind deference. However, there is a latent paradox in this kind of view. If fact-finders were to acquire sufficient scientific

<sup>17</sup> This is a subject I have already dealt with elsewhere, although in that context I had not treated it under the label of cognitive perfectionism. Here I will merely mention some of the arguments presented in two articles and a book, referring back to them for further discussion: UBERTONE 2019, UBERTONE 2022a, UBERTONE 2022b. On deference to experts in courts also see: CANALE 2021.



knowledge to check the actual basis of the expert's testimony, they would probably not need the expert's help in understanding the facts of the case.

As I have argued elsewhere, proponents of the educational model burden judges and fact-finders with a responsibility that could only be fulfilled by cognitively superhuman beings and fail to consider how the division of cognitive labour, and thus deference to experts, is an ineradicable feature of human cognition. This is a blatant example of cognitive perfectionism. The fact that this is a responsibility that cannot reasonably be assumed by an average judge is well understood by the judge who had to apply the educational model standard set by Daubert for the first time in a concrete case, i.e. the district judge who in the Daubert case had stayed the judgement and remanded the question of the admissibility standard to the Supreme Court. In a passage in the remand judgement, he expresses some scepticism about his own ability to personally examine the scientific basis of the evidence, and polemically ironises as follows

«As we read the Supreme Court's teaching in Daubert, [...] though we are largely untrained in science and certainly no match for any of the witnesses whose testimony we are reviewing, it is our responsibility to determine whether those experts' proposed testimony amounts to "scientific knowledge", constitutes "good science", and was "derived by the scientific method" [...] Our responsibility, then, unless we badly misread the Supreme Court's opinion, is to resolve disputes among respected, well-credentialed scientists about matters squarely within their expertise, in areas where there is no scientific consensus as to what is and what is not "good science" and occasionally to reject such expert testimony because it was not "derived by the scientific method". Mindful of our position in the hierarchy of the federal judiciary, we take a deep breath and proceed with this heady task»<sup>18</sup>.

The educational model, motivated by a concern to avoid attributing epistemic authority to experts, attributes wholly unwarranted epistemic authority to judges. Proponents of the educational model emphasise that by not deferring to experts, courts eliminate the possibility of committing fallacies of authority, but they fail to recognise that denying epistemic authority to experts logically implies the need to assign epistemic authority to the judge and jury. A version of this argument was put forward by the cognitive scientist George Lakoff in his polemical paper on Daubert. According to Lakoff (LAKOFF 2005), *Daubert* helped to reinforce, both in the public mind and in the courtroom, an authoritarian view of the judge and his role in the trial. According to this conception, the judge is a subject in whom the legal system must place unconditional trust, and who is better able than those recognised as scientists to verify the conformity of theories with the scientific method. Lakoff speaks of a mutation in the conceptual framework through which we interpret the roles of the various actors involved in the process and their interrelationships.

Any attempt to adhere to the educational model produces a regression to infinity. If, in order to believe what expert opinion tells us, we had to check the validity of the arguments on which it is based, then, for the sake of consistency, we would have to give the same treatment to the expert authorities on which it is based, and so on *ad infinitum*. Every discipline is made up of innumerable chains of deference, which obviously cannot be fully traced in the course of a trial (HARDWIG 1985, HARDWIG 1991). Requiring judges and jurors to educate themselves to the point of replicating the epistemic work of the expert will cause them to devote proportionately less time to epistemic tasks in the trial that can only be performed by them and not by experts, such as comparing the expert testimony with that of other witnesses or selecting the legally relevant elements of the testimony. Moreover, if judges and jurors were really to be required to have access to the reasons that the expert himself gives for his conviction, this would probably take an absolutely unbearable amount of time.

<sup>18</sup> *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311 (9th Cir. 1995).

We need experts only if we can use them as epistemic authorities. If we reject epistemic deference, we also ipso facto renounce the saving of resources that calling an expert to court should entail. This argument can be framed as a kind of transcendental argument. Experts are sources of knowledge. But a necessary condition for them to be sources of knowledge is that we can draw more from them than we must already possess in order to identify them as such. For this to happen, it is necessary that the test of expertise, whatever it may be, does not require independent possession of the information that the expert testimony is supposed to produce. If the test of expertise required such information, experts could never be sources of information.

### 3. Conclusion: is cognitive perfectionism essential to law?

“Ought” implies “can”. If the responsibilities assigned to us by law are impossible to fulfil, there seems to be something deeply wrong with the rules that assign them to us. Similarly, there seems to be something wrong with a legal system that takes care to protect as rights prerogatives from which none of us can actually benefit because of our limitations (like, for example, “consenting” to the technical details of how our cookies are managed), and does not instead take care to protect us from the risks that arise from those very limitations (like the mental health risks of being systematically manipulated by the devices we use everyday). For all of these reasons, I can well imagine that the reader will have interpreted my account of cognitive perfectionism as a criticism of current legal practice. I believe, however, that underlying the unrealistic assumptions of legal practice concerning the functioning of the human mind that I have criticised there may be good reasons and that the possibility of abandoning those assumptions should be the subject of a serious philosophical discussion for which this article is by no means intended to be a substitute. In conclusion, therefore, I would like to present some sketchy considerations in favour of cognitive perfectionism, in order to suggest the kind of discussion that I think legal philosophy should develop in order to explore this issue. The issue, I think, is related to various classical problems of the subject: the nature of legal authority, the nomodynamic character of a legal system and the conflicting relationship between the rational and authoritative components of legal decisions emphasised respectively by natural law theory and legal positivism.

According to a highly influential legal positivist, Joseph Raz, the main service that legal rules provide to a society is the exercise of “authority”, in the technical sense in which he uses that term (RAZ 1985). Authority, for Raz, is the ability to provide a particular kind of reason for action, reasons that he calls “exclusionary,” that is, reasons that exclude the possibility of other reasons being considered in deciding what to do. If I toss a coin to decide whether to go to the cinema to see film A or film B, my commitment to regard the result of the coin toss as authoritative implies my commitment, by virtue of the toss I have made, to exclude the consideration of other, first-order, otherwise relevant reasons. If I decide to give authority to the coin toss, I will choose the film to watch *solely* on the basis of whether the result was heads or tails. The fact that it came up heads or tails will not be an additional reason that needs to be compared and balanced with other reasons, such as whether film A is by a better director than film B, or whether film B is shown in a cinema closer to home. The result of the toss is a reason that supersedes the others.

Authority, defined in this way, is clearly not always reliable or useful. It all depends on who or what you choose to invest in as an authority. Very often, for example, it is not a rational choice to base one’s actions or beliefs on the authority of a coin toss. Relying on authority is only rational if the authority is legitimate. According to Raz, an authority is legitimate if we are better able to achieve our ends by following its instructions than by not following them, or, more precisely, if we are better able to satisfy our “first-order” reasons by obeying the authority than by evaluating those reasons directly. For example, if I rely on the advice of a friend to decide whether to watch film A or film B, my friend is a legitimate authority only if he or she is

better able than I am to determine which film I will like best. This may be the case if the friend has similar tastes to mine and has seen both films, whereas I have not.

The interesting aspect of all this for our purposes is that to recognise an authority as legitimate is, on the one hand, to recognise that it is competent to rationally balance first-order reasons and, on the other hand, to accept that the rationality of that balancing is not open to challenge once the authority has issued its directives. We can then hypothesise that cognitive perfectionism may in some cases be a necessary consequence of the recognition of certain decision-makers as sources of authority in Raz's sense. Think of the authority of the consent expressed by the contracting parties: they are recognised as fully sovereign in the management of their rights, they are recognised as the highest authority in the representation of their own interests (except in cases of legal incapacity). The fact that the agreement between them is recognised as legally valid also implies that it is endowed with authority, and therefore that the individual parties to the agreement are endowed, within the limits set by law, with an incontestable authority to balance the reasons underlying the agreement.

Legal systems are characterised by a particular way of dealing with problems, sometimes described by philosophers as “nomodynamic” (KELSEN, 1949, 110 ff.). By this is meant that, unlike moral rules, legal rules systematically transform problems about what can or must be done into problems about who has the power to decide – who has the authority to decide – what can or must be done. This makes them, as Bruno Celano has pointed out (CELANO 2017, 230; CELANO 2018), systematically vulnerable to a paradox. The most striking example of this paradox relates to the concept of *res iudicata*, the unquestionable authority of final judgments. A legal rule or a decision adopted by the competent authority in accordance with the prescribed legal procedures, but which is wrong on the merits (contrary to the law or based on incorrect factual assumptions) may nevertheless produce its typical legal effects. The law treats judges of final instance as if they were infallible and, in this sense, cognitively perfect: in the name of stability of decisions, it accepts their judgments as necessarily correct. This always makes it possible for the law to accept as true propositions that are inconsistent with each other. For example, substantive law might provide that all persons who  $\phi$  commit an unlawful act, and that Bill, who committed  $\phi$  but was erroneously acquitted by a judge in a final judgement, did not commit an unlawful act. The recognition of authority always implies the possibility of such paradoxes. The same kind of unquestionability also manifests itself in other areas of law where authority is attributed to acts other than judicial decisions. For example, the law may provide in general terms that the content of contracts must of course be known to the parties (contracts are actually often thought of as the meeting of the minds converging on the representation on the same content), but at the same time it may provide for procedures which consider as the “content of a contract” the meaning of a text or set of texts which not only the parties may not know, but which may even be impossible for one or both contracting parties to know (think of the CEO of a large company who signs hundreds of contracts every day comprising tens of thousands of pages).

Recognizing legal authorities allows society to curb the discretion of political decision-makers and ensures social peace, but perhaps comes at the cost of accepting a certain degree of intrinsic irrationality in the legal system. The question arises as to what extent this irrationality is necessary, whether the service that legal authority essentially renders is compatible with a greater realism in the representation of agents and their faculties of understanding and action, whether it is possible for law to adopt a more realistic image of the human mind and at the same time ensure that inviolable areas of freedom and legal certainty are recognised. Would a law “tailored” to the real cognitive capacities of agents still be capable of exerting authority? Do we need law precisely to avoid having to discuss directly what behaviour is rational or irrational (in terms of first-order reasons)? Would eliminating cognitive perfectionism necessarily mean abandoning the rule of law and exposing ourselves to the dangers of the rule of men? Would it mean making law dangerously paternalistic or illiberal? As promised, the purpose of this paper was not to give answers but only to formulate questions, which is why I think I can stop here.

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