

Intuition

The last few decades can rightly be termed the age of intuition. While the traditional approach to human cognition revolved around conscious thinking and investigated such problems as logically valid reasoning schemes, standards for belief revision, formal justification criteria, or ramifications of the rational choice, more recent contributions to the field have enjoyed a somewhat different focus. Psychologists, economists, and philosophers are more inclined to speak about the unconscious decision-making processes, the role of heuristics in human thinking, or the importance of emotions for our cognitive efforts.¹ The image of the human mind that has emerged as a result is one which has been completely transformed. No longer are they a bundle of rational powers, with intuition and other unconscious mechanisms constituting only an irrational nuisance; our minds are increasingly seen as operating largely at the unconscious level and as emotion-driven, with the rational faculties only constituting an addition or overlay of sorts. The goal of this chapter is to consider how this fundamental theoretical shift influences our reflections upon the very nature of legal thinking.

Of course, the question pertaining to the role of intuition or other unconscious processes in legal decision-making is not one that is completely alien to legal philosophy. Representatives of the realist movement, most notably Leon Petrażycki and Joseph Hutcheson, devoted considerable effort to elucidating the place of intuitive judgment in the law.² However, their positions, while doubtless interesting and filled with striking observations, were developed against a relatively poor theoretical background: the picture of the human mind available in the first half of the twentieth century was quite different from the one that is being sketched out by the contemporary cognitive sciences. Therefore, it is only reasonable to rethink the role and place of unconscious processes in legal thinking in light of the latest experiments and theories.

¹ See e.g. Damasio, 2006; Damasio, 2018; Kahneman, 2011.

² Cf. Petrażycki, 2011; Hutcheson, 1929.

There is no common agreement as to the exact shape and nature of the mechanisms comprising the unconscious mind. However, two such mechanisms are usually brought to the fore: intuition and insight. The former is a fast, automatic, and experience-based faculty, one which provides immediate answers to the encountered problem. The latter, in turn, is connected to a situation when no immediate answer is available or the potential answers are in conflict. Under such circumstances, it is possible that a sudden, unexpected, and novel solution to a problem comes to one's mind. Importantly, intuition and insight seem to share the same neural infrastructure; they are linked at the structural and functional level. In this chapter, I will try to show how the interplay between them can help solve legal problems.

The psychological literature places considerable emphasis on the typical and systematic mistakes people tend to commit when they rely on intuitive judgments. This research paradigm was initiated by the groundbreaking experiments of Daniel Kahneman and Amos Tversky in the 1970s.³ Since then, it has been demonstrated that these mistakes (e.g. anchoring effect) are also made in the context of legal thinking.⁴ It is a serious challenge to the claim that intuition, together with other unconscious mechanisms, is an important tool in the lawyer's mental toolbox: if it produces so many mistakes, one should avoid it at any cost. I shall argue, however, that the dangers connected with intuition are considerably exaggerated. Under typical circumstances, our intuitive judgments are quite reliable; they only become questionable when we encounter an abstract and atypical problem.

The discussion of the role of intuition and other unconscious mechanisms in legal decision-making may be seen as a part of a larger debate pertaining to the place of reason and emotions in legal and, more generally, practical reasoning. The picture of the human mind being developed by contemporary cognitive sciences may be somewhat alien to one accustomed to more traditional conceptions. It transpires that we are driven by our emotions not only in social interactions but also in our cognitive efforts. Reason has a relatively smaller, but still important, role to play in this context. From this perspective, lawyers are far more emotional creatures than is usually assumed. I will address this issue in some detail at the end of this chapter.

1.1 HUNCH

In 1929, US judge J. C. Hutcheson published a lecture entitled "The Judgment Intuitive: The Role of the 'Hunch' in Judicial Decision."⁵ It is an enormously engaging, few-page long defense of the role of intuition (Hutcheson calls it *hunch*) in judicial reasoning. Hutcheson admits that he came to appreciate its role quite late, when he himself became a judge. After graduating from university, he

³ Cf. Tversky & Kahneman, 1974.

⁴ Guthrie et al., 2000; Enough & Mussweiler, 2001.

⁵ Hutcheson, 1929.

entertained a different view of the application of law, in which a judge's intellect is a "cold logic engine," and the law is seen as a "system of rules and precedents, of categories and concepts," which could be "administered" correctly to arrive at a solution to any legal problem.⁶ Actually, however, things are quite different:

While when the case is difficult or involved, and turns upon a hairsbreadth of law or of fact . . . , I, after 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.⁷

Hutcheson is quick to add that the hunch is not only at the disposal of extraordinary judges – all good lawyers utilize it, although attorneys will intuitively seek solutions beneficial for their clients, while the judge will aim at a just and legally acceptable decision. Moreover, the role of intuition is not limited to the sphere of law:

that tiptoe faculty of the mind which can feel and follow a hunch makes not only the best gamblers, the best detectives, the best lawyers, the best judges, the materials of whose trades are the most chancey because most human, and the results of whose activities are for the same cause the most subject to uncertainty and the best attained by approximation, but it is that same faculty which has guided and will continue to guide the great scientists of the world, and even those august dealers in certitude, the mathematicians themselves, to their most difficult solutions, which have opened and will continue to open hidden doors; which have widened and will ever widen man's horizon.⁸

Hunch is therefore much more than a vague ability to solve hard cases in law; it is rather a capacity allowing the best experts to reach a state of mind in which the "flash of understanding" helps to solve the most difficult problems in any area of experience. A detective, a mathematician, or a lawyer, if they are really good at what they do, may hope for a hunch. A detective will connect apparently unrelated pieces of information to explain a murder mystery. A mathematician will suddenly spot a similarity between an algebraic problem to be solved and a well-known theorem in category theory, which will lead to the sought-after proof. An experienced judge, facing a hard case, will come up with a decision that is both compatible with the sense of justice and defensible according to the methodological precepts of jurisprudence.

These considerations are still quite sketchy. One would easily agree that some detectives, mathematicians, or judges are better than other representatives of their professions; that they are often able to find a surprising, if not brilliant, solution to a problem they face. One may also admit, after Hutcheson, that any such display of

⁶ *Ibid.*, pp. 274–276.

⁷ *Ibid.*, p. 278.

⁸ *Ibid.*, p. 279.

amazing ingenuity should be attributed to the workings of a hunch, a kind of feeling, which is a characteristic feature of the best experts only. However, we will not achieve too deep an understanding of intuition in law if we stop here: a more thorough analysis of hunch is called for.

The first step is to answer the question of whether hunch is indeed a uniform capacity or rather an outcome of the operations of several different mechanisms. In order to consider this problem, it is reasonable to look at a few concrete legal cases that required something more than the use of typical intellectual tools for dealing with legal questions. For many years, Hutcheson served as a federal judge in Houston, Texas. In 1928, only a year before publishing "The Judgment Intuitive," he presided over the *Hornby Castle* case. "Hornby Castle was streaming up the Houston ship channel. Ahead of the *Castle* were two vessels, a barge traveling slowly in the same direction as the *Castle*, and the steamer *Cody* traveling down the channel toward the barge and the *Castle*. Following customary practice, the *Castle* signalled that it would pass the barge on the left and then cross the channel to pass the *Cody* on the right. However, the *Castle* swung too wide in passing the barge and, in danger of grounding itself upon the bank, collided with the *Cody*."⁹ The facts of the case were not disputed, but the parties adopted different legal qualifications of the facts. The *Cody*'s counsel argued that the cause of the accident was negligence on the part of the *Castle*'s pilot, who failed to abide by the given signals. The *Castle*'s attorney, on the other hand, claimed that according to custom once a ship was in danger the preexisting agreement was voided and avoiding the collision became the duty of a ship not in danger (i.e. the *Cody*).¹⁰

Considering this case, Hutcheson concluded that when there is a conflict of rights, the fault lies with the party that – through acting irresponsibly – caused the danger in the first place, and he entered a judgment for the plaintiff.¹¹ If one assumes that this decision was based on a hunch, it may be defined as an ability to find a solution to a complicated case that respects a rudimentary sense of justice. Such an understanding of hunch is compatible with Hutcheson's explicit declarations. He observes that "the judge really decides by feeling, and not by judgment; by 'hunching' and not by ratiocination, and that the ratiocination appears only in the opinion."¹² And he adds: "all of us have known judges who can make the soundest judgments and write the dullest opinions on them; whose decisions were hardly ever affirmed for the reasons which they gave. Their difficulty was that while they had the flash, the intuitive power of judgment, they could not show it forth."¹³ From this perspective, the use of hunch consists in waiting for a clue from the unconscious; when we are considering a complex legal case, we can finally say: the answer has appeared from

⁹ Cf. Zelden, 1989, p. 87.

¹⁰ *Ibid.*, p. 87.

¹¹ Cf. *ibid.*, p. 87.

¹² Hutcheson, 1929, p. 285.

¹³ *Ibid.*, p. 287.

nowhere and we're certain it is the right one as it "feels right." Such an answer does not need to be rational; it need not come with a ready-made justification. It is rather based on the feeling that "this should be so" although it does not have to be accompanied by the knowledge why this is the right solution.

Hunch can be understood in yet another way. Let us consider a well-known precedent from English law.¹⁴ On September 26, 1928, Mrs Donoghue was spending the evening with a friend of hers in Wellmeadow Café in Paisley, where the other woman ordered a Scotsman ice cream float, that is ginger beer with ice cream, which were served separately. Mrs Donoghue poured half of the beer over her ice cream and ate some of it. Then, while she was pouring the remaining beer onto the ice cream, a decomposed snail emerged from the bottle. The event caused health problems in Mrs Donoghue: she was in a shock for a period of time and suffered from gastritis. For that reason, she decided to file a claim against the producer of the ginger beer, Mr Stevenson, demanding £500 in compensation. From the legal point of view, the situation was complicated since Mrs Donoghue was not bound by a contract with the owner of Wellmeadow Café (it was her friend who bought her the Scotsman ice cream float) or with the beer manufacturer, and in accordance with the law at the time, compensation for injury caused by defective products could only be claimed on the basis of a legally binding commercial contract. Ultimately, the case was heard by the House of Lords, where a decision was made, in a 3 to 2 vote, in favor of Mrs Donoghue and she was awarded the compensation. Lord Atkin, one of the judges, justified the decision as follows:

in English law there must be, and is, some general conception of relations giving rise to a duty of care, of which the particular cases found in the books are but instances. The liability for negligence . . . is no doubt based upon a general public sentiment of moral wrongdoing for which the offender must pay. But acts or omissions which any moral code would censure cannot, in a practical world, be treated so as to give a right to every person injured by them to demand relief. In this way rules of law arise which limit the range of complainants and the extent of their remedy. The rule that you are to love your neighbour becomes in law, you must not injure your neighbour; and the lawyer's question, Who is my neighbour? receives a restricted reply. You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then, in law, is my neighbour? The answer seems to be – persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question.¹⁵

Thus, Lord Atkin argues that Mr Stevenson's *ex delicto* liability toward Mrs Donoghue is deeply rooted in the principles of English law, and more precisely, in the (unwritten) rule that requires us to take proper care of persons who can be

¹⁴ *Donoghue v. Stevenson* [1932] AC 562.

¹⁵ *Ibid.*

affected by our actions. What role could hunch have played in deciding the *Donoghue v. Stevenson* case? The judges must have felt that someone should be held responsible for Mrs Donoghue's injury. It is worth noting, however, that something else was of crucial importance in the decision made by the House of Lords: the argument that Mr Stevenson's liability was grounded in the structure of English law; that the decision in Mrs Donoghue's favor "fitted into" the larger puzzle of the legal principles, rules, and precedents. That was also a kind of feeling, or hunch: the sense of congruity between a particular decision and broadly defined legal knowledge. A similar course of reasoning must be entertained by a great mathematician or a smart detective: it is not enough to "feel" that a claim is true; it must also "fit in" with the previously proved hypothesis; it is not enough to have a strong feeling that person X is the murderer – such a hypothesis must bring the available bits of information into proper order so that it creates a feeling of a consistent whole. It must be added that such a feeling does not yet constitute a justification for the decision made. Like any other feeling, it is subjective in nature, which is why it must be integrated into the structure of rational argumentation to have any public or objective weight.

Let us summarize the discussion. When Hutcheson speaks of a hunch, what he has in mind is a capacity typical of brilliant experts: lawyers, mathematicians, gamblers, detectives, etc. However, it seems that everyone can be assumed to have a *kind* of hunch: even the least talented judge or mathematician, faced with a problem, will "feel" that it is worth considering a particular solution. Ingenious experts will simply have better "feelings." What is more, the quality of a hunch must depend on a person's education and experience. Even a most talented mathematician is never born with the ability to prove complex theorems of noncommutative geometry; similarly, a talented student of law – perhaps a future judge of the Supreme Court – cannot answer difficult legal questions without some consideration. Hunch is something we gradually develop. Finally, when Hutcheson describes the ways in which hunch works, he seems to be speaking of two different, though related, abilities. One is the ability to make a quick, almost automatic judgment concerning a given situation (e.g. which of the two parties in a legal case is right); the other one is the capacity for finding an unexpected solution that "fits in" with the already established facts, theories, or normative systems (i.e. with the available knowledge). Psychologists use the term "intuition" to refer to the first ability, while the latter is called "insight."¹⁶

1.2 WHAT IS INTUITION?

"Intuition" is a word with a turbulent history. It comes from the Latin *intueri*, "examine," "consider." Up until the eighteenth century, it was used to denote

¹⁶ Cf. Dorfman et al., 1996, p. 257.

a mental take on a given situation, examining things in one's "mind's eye." In the course of time, however, its use shifted away from the etymological source, first in philosophy and theology, and then in other disciplines.¹⁷ Today, the word is used with reference to the ability to understand something instinctively, without the need for conscious reasoning.¹⁸ This semantic development of "intuition" can easily become the cause of serious misunderstanding or conceptual confusion. For example, there is so-called analytical (rational) intuition,¹⁹ especially in such disciplines as mathematics and logic. The question of how we know that in a plane, given a line and a point not on it, at most one line parallel to the given line can be drawn through the point, can only be answered: "one can see it" or "it is evident." The same mechanism seems to be at work in more complex problems, though. Let us consider the proof that is usually given at school for the Pythagorean theorem: a diagram is usually drawn on which one can "see" that the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the other two sides. There is no complex mathematical argumentation here or any moving step by step from premises to conclusions (even if the construction of the diagram that is used in the proof takes several steps). The truthfulness of the claim that in every triangle the sum of the lengths of any two sides is greater than the length of the other side and the truth of the Pythagorean theorem are discovered by intuition in the sense that we can "see" that they are correct; these propositions are "evident."

Some also speak of phenomenological intuition.²⁰ In simple terms, it can be defined as the ability to grasp that which is essential in phenomena, i.e. in the objects of a person's conscious perception, whether it be an item of furniture (e.g. a three-legged table), a relation between people (e.g. love), or a legal institution (e.g. a car sales contract between person X and person Y). According to phenomenologists, one can discover a priori elements in every phenomenon, i.e. ones that are independent of experience. We recognize an object as a table because it fits in with the a priori form of a table: if it did not have a table top, we would categorize it as something else. Similarly, a relation between two people that is based on egoism and reluctance to make sacrifices for another person can hardly be considered love, as this feeling has its particular a priori form too. A legal contract also has such a form: if person Y was only playing a joke on person X by saying that they will sell them their Porsche for \$500, we would not conclude that a promise has been made, and hence there would be no binding contract. Well-trained phenomenological intuition helps us to discover that which is a priori in phenomena, which constitutes their invariant forms.²¹

The meanings of analytical and phenomenological intuitions are based on the etymological source of the word; in this sense, intuition is the ability to perceive

¹⁷ Cf. Simpson & Weiner, 1989.

¹⁸ Cf. Stevenson & Soanes, 2006.

¹⁹ Cf. Tieszen, 1989.

²⁰ Cf. Levinas, 1973.

²¹ Cf. Kaufmann, 1986; Stelmach, 1991.

something with one's mind's eye, whether it is about the truthfulness (evident nature) of a claim or the a priori structures of phenomena. However, such an approach is unfamiliar to a psychologist or even a "naturalized" philosopher. Although they may admit that the phenomenon of analytical intuition is real, they will contend that it should be given a different, less confusing name; perhaps, they could even concede that there is phenomenological intuition, but – they will argue – it is a somewhat mysterious ability, just as the a priori structures that phenomenologists talk about. Still, we can respond to these reactions by saying that psychologists and more empirically inclined philosophers had better treat their opponents' views with more caution and look at them with greater sympathy. After all, both the advocates of analytical intuition and phenomenologists want to account for certain aspects of our everyday experience, even if they approach the task with sophisticated and slightly artificial conceptual frameworks. They may be doing that in a rather hasty manner, without due respect for the principles of empirical methodology, and hence without proper justification. However, the fact is that they employ the concepts of analytical and phenomenological intuitions in order to discover some truths about human cognitive processing.

On the other hand, the conceptual confusion cannot be regarded as a property of a well-constructed theory. The claim that a lawyer can employ different kinds of intuition – analytical, phenomenological, and psychological ones – may be justifiable at the level of metatheoretical considerations but not in developing a coherent conception of legal reasoning. Therefore, in the discussion that follows I will employ the term in its psychological sense, albeit without losing sight of those capacities of the human mind that are often referred to as analytical or phenomenological intuition (though I will not use these terms).²²

What is, therefore, intuition in the psychological sense? In view of the multiplicity of approaches to intuitive cognition in contemporary cognitive science, we should not expect to formulate one uncontroversial definition of "intuition." What is more, that would be a short-sighted approach that would lead to oversimplifying the problem and incorrect conclusions. What seems more reasonable is to seek a more general characterization of intuitive cognition by indicating some of its characteristic properties. Such an approach should enable us to incorporate various, sometimes quite different, understandings of intuition in our model.

Psychologists seem to agree that intuition is an unconscious mechanism.²³ However, "unconsciousness" is an ambiguous term, and it is Sigmund Freud who is, in a large measure, to be blamed for that. In his early texts, he used two terms – "the subconscious" (*das Unterbewusste*) and "the unconscious" (*das Unbewusste*) – interchangeably to refer to memories, feelings, and other mental phenomena that are beyond a person's conscious control, claiming that they represent the main

²² Cf. Chapter 2, where I discuss the role of imagination in legal reasoning.

²³ Cf. Gigerenzer, 2007.

source of psychological disorders. With time, in order to prevent confusion, he abandoned the first one and only used the concept of unconsciousness.²⁴ Of course, when psychologists speak of the unconscious nature of intuition, they do not refer to Freud's theory. The feeling that enables a mathematician to solve a complex arithmetic problem and that helps a judge to decide a difficult legal case has little to do with deeply hidden memories that haunt our nightmares.

Another understanding of unconscious mechanisms, and one which is commonly adopted in the cognitive sciences, sees them as operating on subliminal stimuli.²⁵ Those stimuli are too weak, too short, and lack the intensity to be perceived and become the object of conscious reflection, but they can influence our behavior. Unconscious cognition has been the subject of discussion since 1957, when James Vicary, a marketing specialist, announced that he had managed to increase the sales of Coca-Cola and popcorn at the cinema in Fort Dix (New Jersey) by displaying the texts "Drink Coca-Cola" and "Eat popcorn" for a very short time.²⁶ Today, Vicary's "study" is widely recognized as a fraud; at the same time, though, numerous replicable experiments show that – under special circumstances – subliminal stimuli can influence the decisions people make.²⁷ However, intuition cannot operate exclusively on such stimuli. The nature of the problems that talented judges or brilliant mathematicians intuitively solve does not allow much room for the occurrence of subliminal signals. Considering a difficult legal case, such as the *Hornby Castle* case, is a far cry from watching a film in which a smart marketing expert displays a subliminal message such as "Drink Coca-Cola." Thus, even if some intuitive judgments are (partly) based on subliminal signals, it is not the source of recognizing intuition as an unconscious mental mechanism.

According to a third understanding of unconscious processes, these are processes that we are not aware of, but that could – at least potentially – become the object of our conscious reflection. In his well-known book *The User Illusion*, Tor Nørretranders claims that in every second we only process 16 bits of information out of the 11 million bits that reach our brains from the senses.²⁸ Even if these estimates are based on unconfirmed experimental data and on creative simplification, it is commonly accepted that we are conscious of very few of the processes that constantly take place in our brains.²⁹ This fact is borne out by numerous studies and theories which show that the unconscious mind has a ubiquitous and powerful influence on the human psyche, from learning to decision-making.³⁰ It is precisely in this sense that intuition is an unconscious mechanism: it is beyond our control, although what it does for us could potentially (at least in large part) be effected

²⁴ Cf. Bargh & Morsella, 2008.

²⁵ Cf. *ibid.* See also Lakoff & Johnson, 1999.

²⁶ Karremans et al., 2006, p. 792.

²⁷ Cf. *ibid.*, p. 793f.

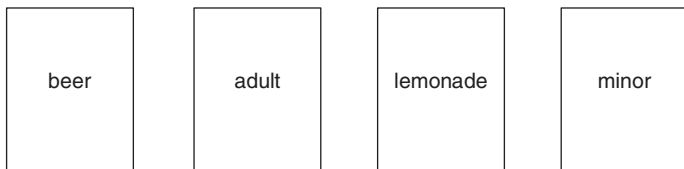
²⁸ Cf. Nørretranders, 1999.

²⁹ Cf. Bargh, 2017.

³⁰ Cf. Bargh & Morsella, 2008.

consciously. As a rule, intuition does not operate on stimuli that cannot become conscious but on ones that have not become conscious. It is not a mysterious ability that surpasses sophisticated reasoning; it is quite an ordinary process that takes place at the backstage of our conscious thinking and supports it with clues in our problem-solving activities.

There are crucial differences between intuition and meticulous reasoning. Conscious thinking is relatively slow and it requires concentration, but it offers a sense of free choice.³¹ By contrast, intuition “operates automatically and quickly, with little or no effort and no sense of voluntary control.”³² Let us use the so-called Wason selection task to illustrate these differences.³³ There are four cards on the table. Each of them has a word printed on one side, specifying whether a given person is an adult or a minor, while the word on the other side informs us whether the person drinks beer or lemonade. The cards are shown in such a way that we can only see one side of each card:



Now, let us consider the following rule: “If a person drinks beer, he or she should be adult.” Which one(s) of the four cards should be turned over to check if the rule was broken? One would answer,³⁴ without much hesitation, that the cards with the words “beer” and “minor” should be turned over. One would not be concerned with adults and those who drink lemonade, but would want to check whether the beer drinker is an adult and whether the minor drinks lemonade rather than beer.

It is worth noting that this is a logical problem and, in order to solve it, we need to understand the nature of the so-called material implication: “If p , then q .” The implication is false in only one case: if its antecedent (p) is true and its consequent (q) is false. If the rule says, “If a person drinks beer, he or she should be adult,” it will be false (broken) only when on one side there is information that the person drinks beer and, on the other side, information that the person is a minor. That is why, in this task, we should look at the other side of the card that says “beer” (since if the word on the other side is not “adult,” then the rule is broken) and at the other side of the card with the word “minor” (since if the word on the other side is “beer,” then the rule is broken).

³¹ Kahneman, 2011, p. 21.

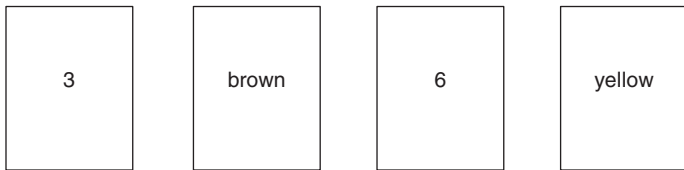
³² *Ibid.*, p. 20.

³³ Cf. Wason & Shapiro, 1971.

³⁴ Statistically speaking; cf. Wason & Shapiro, 1971.

The point is that we do not engage in any conscious reasoning while solving this version of the Wason selection task! We do not start by observing that the rule “If a person drinks beer, he or she should be adult” has the form of a material implication; we do not determine what is the antecedent and what is the consequent here; we do not reflect on when the implication is false; and finally, we do not conclude that the rule is broken only when its antecedent (“The person drinks beer”) is true and the consequent (“The person is an adult”) false. The conviction that the cards with the words “beer” and “minor” should be turned over is not a result of reasoning: it appears quickly and automatically, beyond our conscious control, almost with no mental effort on our part. It is an intuitive judgment.³⁵

Let us now consider an alternative version of the selection task. Suppose the cards have the word “yellow” or “brown” on one side, while the other side has an odd or even number printed on it, and the cards are arranged as follows:



The rule governing this example says: “If a card has the word ‘brown’ on one side, then there is an even number on the other side.” In this case, intuition will also provide us with an immediate answer. The problem is that in about 90 percent of cases the answer is wrong.³⁶ Most of us will say that we should turn over the card with the word “brown” or perhaps two cards: the one with the word “brown” and the one with the number 6. However, the correct answer to this problem, which is analogous to the first version of the Wason selection task, is that we should check the cards with the word “brown” and with the number 3, since the rule will prove false only if a card has the word “brown” on one side and an odd number on the other. The mistake produced by intuition can, obviously, be corrected but that can only be done by means of slow and focused reasoning.

The speed of intuition can be ascribed to the fact that it is based in large part on affective processes.³⁷ An intuitive judgment is an emotional reaction to a state of affairs, such as a problem that we face. Although there is no common agreement as to the form of the mechanism responsible for such reactions, there are compelling theories to account for it. The most famous one is the somatic marker hypothesis put forth by Antonio Damasio.³⁸ Damasio’s hypothesis was formulated in the context of

³⁵ Naturally, this description does not apply univocally to every single person. Someone who has had the opportunity to consider similar tasks in the past or is a well-trained logician may approach the problem in a different way.

³⁶ Cf. Wason & Shapiro, 1971.

³⁷ Cf. Zajonc, 1980.

³⁸ Cf. Damasio et al., 1996.

research into the process of making social decisions by patients with injuries to the ventromedial prefrontal cortex. Such patients often manifest “asocial” behavior despite the fact that they are normal in terms of intellectual functioning (such abilities as memory, language, and perception remain within normal limits). They cannot make proper use of emotions and feelings to guide their behavior. According to Damasio, the cause of the disorder lies with the fact that such patients have a disrupted access to so-called somatic markers. In a situation that calls for a complex decision-making process, a normal brain activates somatic states that “categorize” the possible ways of behaving as good or bad. This information is (consciously or unconsciously) used by the organism to take a favorable course of action.³⁹ Importantly, somatic markers develop with experience, which we acquire in social interactions: they are learned rather than innate. They help us to make unconscious, intuitive decisions that can be rational:

The quality of one’s intuition depends on how well we have reasoned in the past; on how well we have classified the events of our experience in relation to the emotions that preceded and followed them; and also on how well we have reflected on the successes and failures of our past intuitions. Intuition is simply rapid cognition with the required knowledge partially swept under the carpet, all courtesy of emotion and much past practice.⁴⁰

Damasio highlights an important fact here: good intuition is an effect of training. Most people give a correct answer immediately in the version of the Wason selection task that is based on the rule “If a person drinks beer, he or she should be adult.” This can be explained by the fact that they use well-trained intuition. After all, it is from our earliest years that we have to deal with the social norm that prohibits the consumption of alcohol by underage individuals, which is why we can “automatically” understand it and decide whether it is violated. By contrast, the rule “If a card has the word ‘brown’ on one side, then there is an even number on the other side” has little to do with our everyday experience. Our knowledge of the world, which we have acquired over the course of many years, simply does not include information about the relationship between color and number parity; but it does include information about the link between age and drinking alcohol.

The fact that our intuition is based on our previous experience has an important bearing on the discussion on intuitive decisions in such disciplines as law. An average person who has not gone through proper legal training is not able to make quick and correct decisions even in relatively simple legal problems. From that person’s perspective, such problems are more or less like a Wason selection task based on the rule “If a card has the word ‘brown’ on one side, then there is an even number on the other side.” Of course, just as in the case of the selection task, intuition will provide that individual with *some* clue, but they cannot expect it to be

³⁹ Cf. Damasio et al., 1991.

⁴⁰ Damasio, 2006, p. xix.

the right answer. By contrast, an experienced lawyer, who has not only obtained adequate education but has also engaged in legal practice for many years, is in a far better situation here: intuition will usually provide them with the correct solution. In other words, an experienced lawyer is an expert in their discipline, just like a physician with adequate experience or a carpenter who has made items of wood for many years. In each case, their expert knowledge concerning, respectively, legal issues, diagnosing and treating patients, and making wooden objects has, as a result of a long-term training, been “swept under the carpet,” thereby becoming intuitive.⁴¹

This analysis shows that intuition is *unconscious* (the processes that lead to providing an answer to a given problem take place beyond one’s consciousness, with the answer appearing out of “nowhere”), *fast* (in comparison with conscious reasoning), *automatic* (intuitive judgments emerge spontaneously; they cannot be intentionally controlled), and *based on experience* (intuition draws on the knowledge that we have acquired in our interactions with the environment). The two versions of the Wason selection task suggest one other thing: intuition can be wrong. Nevertheless, it is hardly surprising that intuition can suggest incorrect answers concerning issues in which we have not acquired adequate experience, for example when we deal with the rule “If a card has the word ‘brown’ on one side, then there is an even number on the other side” or when a lay person is faced with a complex legal problem. The fact that our intuition leads us astray regarding issues that we have little knowledge or experience in is rather natural. However, studies show that even experts’ intuitive judgments can be wrong in certain circumstances. Let us consider this phenomenon now.

1.3 INTUITION’S MISTAKES

The human mind is a device that has to deal with an extremely complex world, something of a tough challenge for two reasons: on the one hand, it is impossible in a decision-making process to take into consideration all of the relevant items of information that we have managed to acquire. On the other hand, we can always assume that we have no access to numerous facts that should have a bearing on the decision we are making. In other words, there are two respects in which we are quite different from Laplace’s omniscient demon: neither can we know everything, nor can we actively take advantage of everything we know or could know.⁴² That would simply be beyond our cognitive capacity.

For example, let us imagine a judge who is to decide upon a simple case concerning compensation liability resulting from a failure to comply with a contract. The judge would have to answer the question of whether the contract was concluded in the first place. This may seem to be a simple task, especially when

⁴¹ Cf. Kahneman & Klein, 2009.

⁴² Cf. Heller, 2013.

the plaintiff presents a copy of the contract that is signed by both parties. However, Laplace's inquisitive judge should ascertain whether the defendant's signature is authentic. To this end, the court has to call in an expert witness with adequate expertise to examine the signature. The problem is that expert witnesses are sometimes wrong; after all, they are also human beings, who are susceptible to error, have their own weaknesses, and employ imperfect theories and technologies. Laplace's judge would have to take this fact into consideration; yet, it would be of little help to call in an infinite number of expert witnesses and to conduct a thorough analysis of the available graphological theories, with all their underlying assumptions. The kind of certainty that this judge seeks is unattainable. Even if the plaintiff and the defendant both admitted that they had concluded the contract, Laplace's judge would still have to allow for the fact that the defendant's declaration could be a result of psychological coercion. This time too, the judge could call in an expert witness, but again with a similar result. The same is true about the other issues that the judge would have to consider: determining the full contents of the contract, confirming that it has not been fulfilled, estimating the extent of the loss, etc. None of these questions, whether factual or normative, can be answered with absolute certainty; there will always be additional items of information that have not been acquired but that might prove relevant to the problem under consideration.⁴³

Although real judges have little to do with Laplace's demon, they are in a fairly good situation as no one expects them to make instant decisions. Of course, we would prefer quick legal proceedings, but it would be unreasonable to expect instantaneous court decisions made without evidentiary hearing or adequate deliberation. By contrast, most of the decisions we make on a daily basis are different. Nobody engages in a several-days long, meticulous analysis that would require gathering a lot of data while doing the shopping at a store, choosing a restaurant for a dinner with friends, deciding whether to go there by tram or on foot, or evaluating the credibility of a passerby asked about the way. Such decisions must be taken relatively quickly, since it is only in this way that we can effectively function in a social environment.

Evolution has coped with this problem by providing our minds with heuristics, a kind of "mental shortcut." Instead of taking into consideration all the information that could prove relevant to solving a given problem, thereby wasting time on gathering and analyzing it, in our decisions we rely on a few selected facts.⁴⁴ We use this strategy very frequently, both consciously and unconsciously. It is also employed in law, and in a much institutionalized manner at that: after all, legal presumptions are examples of heuristics. For example, in Polish law the presumption of paternity leads to the acceptance of a given claim without determining all of the potentially relevant facts (e.g. no DNA paternity testing is done), based on only

⁴³ Laplace's judge is different from Dworkin's Judge Hercules: the former knows everything about facts, while the latter knows everything about the law. Cf. Dworkin, 2013, p. 132ff.

⁴⁴ Cf. Simon, 1956; Gigerenzer, 2001.

some of the facts (e.g. the fact that the child is born within nine months after the termination of the marriage). However, these are examples of highly abstract and consciously applied heuristics. And the human mind, whose time and energy resources are limited, also needs to employ heuristics at a more elementary level of experience in unconscious decision-making.

For example, from the evolutionary point of view, it is reasonable to make decisions on the basis of data that can be easily retrieved from memory. Studies show that what we remember particularly well is, *inter alia*, recurring events (whether we only witnessed them or were their participants) and those associated with strong emotional reactions.⁴⁵ It is easy to observe that such events must be particularly important for the organism. We have to cope with recurring events much more frequently than with untypical situations, while the circumstances that trigger strong emotional reactions are by definition relevant to our well-being. It can be argued then that information that can be easily recalled should play a significant role in our fast and unconscious decision-making as it relates either to the problems we face most frequently or to problems that are particularly crucial to our survival. In the psychological literature, this decision-making mechanism is referred to as the availability heuristic.⁴⁶ Another mechanism that the evolutionary perspective can shed light upon is our reliance on that which is representative of a certain type of action or object in our unconscious decision-making. Again, by definition, we usually deal with typical situations. Therefore, from a statistical point of view, our first, unconscious reaction to any problem should be based on the assumption that the problem is typical or very similar to a prototypical situation. In psychology, this decision-making mechanism is known as the representativeness heuristic.⁴⁷ Finally, it can be argued that quick and unconscious decisions cannot ignore the “immediate surroundings” of a given problem. Such contextual information will, most probably, turn out to be important in our search for the solution. If particular items of information reach the brain (almost) at the same time, it must be assumed that this is not a coincidence. A special type of this mechanism is often referred to as the anchoring and adjustment heuristic.⁴⁸

Intuition is based on (availability, representativeness, and anchoring and adjustment) heuristics, which is why it can provide us with quick solutions to our problems. However, there is a price that we have to pay for this speed. Psychological studies – in particular those of Kahneman and Tversky – have demonstrated that our trust in intuitive judgments may result in systematic errors.⁴⁹ One of them is the so-called anchoring effect: while making quantitative estimates, people unconsciously rely on the “anchor,” i.e. a readily available number

⁴⁵ Cf. Kensinger, 2009.

⁴⁶ Cf. Kahneman, 2011.

⁴⁷ Cf. *ibid.*

⁴⁸ Cf. *ibid.*

⁴⁹ Cf. Tversky & Kahneman, 1974, p. 1974.

that does not have anything to do with the problem at hand. In their classic experiments, Kahneman and Tversky asked the participants to estimate what percentage of the UN members were African countries. First, however, the participants were to decide whether the figure was greater or smaller than the number indicated by a spinning wheel. The spinning wheel was “tweaked” to indicate either 10 or 65. It turned out that the participants who had drawn 10 on the spinning wheel made the average estimate that about 25 percent of the UN members were African countries; by contrast, those who had drawn 65 averaged out at a much higher estimate, about 45 percent. This and other studies suggest that our intuitive judgments may highly rely on irrelevant, random quantitative data.⁵⁰

The anchoring effect can also be observed in law. Chris Guthrie, Jeffrey Rachlinski, and Andrew Wistrich had a group of judges consider the following case. The plaintiff was hit by a truck belonging to the defendant company. It was determined that the cause of the accident was the truck’s faulty brakes; what is more, the defendant company had not performed the obligatory periodical technical checkups of the truck. Following the accident, the plaintiff was hospitalized for several months and had been confined to a wheelchair ever since. Prior to the event, he had been an electrician of good repute and had a large number of regular clients. In court, he claimed damages for the lost income, in addition to the costs of the medical care and the harm he had suffered. However, he did not specify the amount he wished to claim from the defendant. The judges who participated in the experiment were to decide on the amount of the compensation that the plaintiff should receive. They were divided into two groups: judges in one group were provided with the above description of the facts; in the other group, the description additionally included the information that the defendant had filed a motion to dismiss the claim on the grounds that the losses incurred by the plaintiff did not exceed US\$75,000 and that the claim should therefore be considered by a different court of law. The defendant company’s motion was obviously unfounded since the losses incurred by the plaintiff with all certainty exceeded the amount of \$75,000. Yet, it turned out that adding the information with this number to the description of the facts had a significant impact on the participants’ average estimate of the due compensation. Whereas the judges in the first group were inclined to award the plaintiff an average amount of \$1,249,000, those in the second group must have been “anchored” to the figure 75,000 and decided to award him only \$882,000 on average.⁵¹

In their classic 1974 study “Judgment under certainty: Heuristics and biases,” Kahneman and Tversky discuss two other types of systematic errors that can result from reliance on intuitive judgment.⁵² One of them is connected to the use of the representativeness heuristic. The participants of an experiment conducted by

⁵⁰ Cf. *ibid.*, p. 1128.

⁵¹ Cf. Guthrie et al., 2000, p. 2018.

⁵² Cf. Tversky & Kahneman, 1974.

Kahneman and Tversky were to order, from the least to the most probable, several scenarios of the future of a young woman named Linda, who was 31, single, talkative, and very intelligent. The woman was a philosophy graduate who had been an activist against discrimination and for social justice and had taken part in demonstrations against nuclear power. The scenarios to be arranged included: (a) Linda is an activist in the feminist movement; (b) Linda is a social security worker who helps people with mental disorders; (c) Linda is a member of the League of Women Voters; (d) Linda is a bank teller; (e) Linda is an insurance salesperson; (f) Linda is a bank teller and an activist in the feminist movement.⁵³ Kahneman and Tversky were shocked to find out that *all* the participants considered it more probable that Linda would be a bank teller and an activist in the feminist movement than that she would be a bank teller only. This is an obvious fallacy since the probability of two independent events occurring together is lower than the probability of either one of them occurring alone. This fallacy can be accounted for with the hypothesis that intuition is based on the use of the representativeness heuristic: Linda's traits are representative of a feminist activist, and not of a bank teller, which is why the scenario of her future life in which she is active in the feminist movement appears so overwhelming that we ignore the fundamental laws of probability.

Errors of this type are also committed by lawyers in connection with legal problems. In one study, attorneys were asked to estimate the chances that a given legal case (*Jones v. Clinton*) would end in a particular way: with judicial verdict, dismissal, settlement, withdrawal of the legal action, etc. One of the other options was "other than a judicial verdict." It turned out that the subjects considered the probability of a settlement between the two parties to be higher than that of an outcome "other than a judicial verdict," although the latter option includes the former one, along with several others (dismissal, withdrawal, etc.).⁵⁴ It can be argued that this error stemmed from the fact that some of the characteristics of the *Jones v. Clinton* case were representative of cases that usually end in settlement; by contrast, there are no features that would be representative of cases whose typical outcome is "other than a judicial verdict."

Another type of fallacy in the use of intuition that Kahneman and Tversky demonstrated in their study is a consequence of the application of the availability heuristic. As already mentioned, it consists in estimating the probability of a certain type of event on the basis of how easy it is for us to recall its instances. For example, when speakers of English are asked whether there are more English words beginning with the letter "r" or more with "r" as the third letter, they usually choose the first answer, which is incorrect, most probably because it is easier to recall words beginning with the letter "r" than those in which "r" is the third letter.⁵⁵ Lawyers are also susceptible to this type of error in their legal practice. Let us consider the

⁵³ Cf. Kahneman, 2011, p. 211.

⁵⁴ Peer & Gamliel, 2013, p. 116.

⁵⁵ Cf. Tversky & Kahneman, 1974, p. 1127.

following example.⁵⁶ The participants of an experiment were given a description of a legal case concerning a car accident caused by an intoxicated driver. The description included both the prosecutor's and the attorney's lines of argumentation. One half of the subjects received the description of the attorney's argumentation written in vivid and concrete language, with the attorney's argumentation described in a more abstract way, while the other half of the subjects received descriptions of the opposite kind. It turned out that the two groups of subjects gave similar verdicts immediately after reading the files; however, when they were asked to deliver a verdict again after 48 hours, the participants had a tendency to favor the party whose argumentation was written in a more vivid and concrete language. In other words, those who received a vivid version of the prosecutor's line of argumentation tended to find the defendant guilty, while those who read a more concrete description of the attorney's reasoning were more inclined to find the driver not guilty.⁵⁷ The source of this effect is often ascribed to the availability heuristic: it is easier to recall a more vivid and concrete description of an event than one using abstract language, full of technical terms and statistics.

Besides these three types of error – associated with the anchoring effect and the representativeness and availability heuristics – the literature describes other phenomena where intuitive judgments go awry, and also in the legal context. They include: the hindsight bias, the framing effect, and the egocentric bias.⁵⁸ Does this mean that a lawyer cannot trust their intuition? An affirmative answer to this question would be a gross misunderstanding. It can be hypothesized that the errors in deciding legal cases reported in the literature, committed by both lay persons and individuals with a legal education and long experience in legal professions, are more indicative of the nature of the tasks given to experiment participants than of the (un)reliability of intuitive cognition. Let us consider the cognitive mechanisms described by Kahneman and Tversky (e.g. the availability heuristic). When we are asked the question as to which city is larger, Chicago or Baltimore, we will immediately choose the first. The reason is simple: Chicago is more “available” as we have heard a lot about it and we know that it is a great metropolis with long traditions, while for most of us “Baltimore” is only a label associated with little or no knowledge. It is worth repeating: such a mental shortcut – that the city which we have heard more about and which is often dubbed the capital of blues and jazz, and associated with Al Capone, the Sears Tower, and Michael Jordan's Chicago Bulls is larger – is quite reasonable. In other words, it is easier for us to retrieve from memory that which is more vivid in our experience and more important for our actions in the world.

There is a similar situation with the other mental shortcuts that we employ in our intuitive reasoning. For instance, the representativeness heuristic provides

⁵⁶ Reyes et al., 1980.

⁵⁷ Cf. *ibid.*

⁵⁸ Cf. Hastie et al., 1999; McCaffery et al., 1995; Langevoort, 1998.

us with suggestions on the basis of certain schemas or prototypes: if a given situation is sufficiently similar to the typical circumstances in which we are in danger, intuition will tell us that we should be particularly careful.⁵⁹ If a person has traits that are typical of nice and friendly people – they smile a lot, tend to offer help, and are polite – we will draw the intuitive conclusion that there is nothing dangerous about them. Of course, we can be wrong in both cases. A “dangerous” situation may prove to be a joke played on us by our friends (who play on our intuitive reactions), while a friendly stranger may turn out to be a psychopath killer. The point is that such mistakes are relatively infrequent; they are frequent and systematic only in relation to problems that are themselves untypical, at least from the perspective of the evolution of the human mind (e.g. when we face a problem that calls for statistical analysis or one that has little to do with our everyday problems). In other words, intuition is a very useful cognitive ability that usually provides us with useful, if not perfect, suggestions on how to tackle a particular problem.

Once more, it must be stressed that good intuition is a result of experience and training. We cannot expect correct intuitive judgments concerning legal matters from a person who has had little to do with law; in a similar vein, a person with almost no experience in carpentry cannot count on useful intuitions regarding the restoration of an old wooden staircase. Given this, we can conclude that legal intuition is a real phenomenon; however, it is not a mysterious ability: a lawyer has legal intuition just as a mathematician has mathematical intuition and a physician medical intuition. Their intuitions use the same neural architecture, which is, however, filled with different contents as a result of a long process of training and experience.

1.4 INSIGHT

“Eureka!” This is perhaps the most famous exclamation in history. Everyone knows the story from school: King Hiero of Syracuse had commissioned his goldsmith to make a votive crown. The goldsmith, however, was accused of stealing some of the king’s gold and replacing it with silver. “Furious that he may have been cheated, Hiero ordered Archimedes to investigate the matter. To ponder over the problem, Archimedes went to the public baths, where he noted that the more his body sank into the water, the more water was displaced. . . . Overwhelmed with joy, he leaped out of the bath and rushed home naked, shouting: ‘Eureka! Eureka!’”⁶⁰ Once at home, he made two objects – one of gold and one of silver – of the same weight as the king’s votive crown and observed how much water was displaced by each. It turned out that the volume of water displaced by the new crown was greater than the

⁵⁹ Cf. Kahneman & Tversky, 1972.

⁶⁰ Smólski, 2001, p. 45.

volume of water displaced by the golden object and smaller than the volume displaced by the silver object. Here was definitive proof of fraud.

It is easy to prove that nothing like this could have happened. A typical ancient Greek votive crown had an average volume of about 37 cm³. When placed in a container of 20 cm in diameter, it would have raised the level of water by about 1.2 mm. A crown of the same weight but comprising 80 percent gold and 20 percent silver would have a volume of about 43 cm³ and would raise the level of water by about 1.4 mm. If we allow for the meniscus (the curve at the surface of the water), the difference between these volumes does not exceed the measurement error. Simply, Archimedes could not have applied this method to prove that any fraud had taken place; as argued by historians, he had much better methods at his disposal to do so anyway.⁶¹

Thus, it is more than probable that the story which has Archimedes running naked in Syracuse and crying “Eureka!” never actually took place. This fact is of little importance, however, since Archimedes crying “Eureka!” is a beautiful metaphor describing the situations in which we unravel nature’s greatest mysteries. Archimedes may not have run naked in Syracuse, and Isaac Newton may not have been struck by a falling apple; yet, there are numerous verified stories in the history of science describing how innovative ideas suddenly arose in the minds of thinkers in an illuminating moment of understanding. It suffices to recall how Friedrich August Kekulé discovered the structure of benzene after having a dream of a snake eating its own tail; how Henri Poincaré found the solution to a vexing mathematical problem when he put his foot on the step of a horse-drawn omnibus; or how Werner Heisenberg, plagued with hay fever, formulated the theory of quantum mechanics during his trip to the island of Helgoland.

Such moments of illumination or insight are also experienced by lawyers. At the beginning of the chapter, we made reference to the *Donoghue v. Stevenson* case, in which, despite the lack of explicit legal regulations, the House of Lords decided to hold Mr Stevenson responsible for the losses incurred by Mrs Donoghue on the grounds that such a decision was compliant with the broader context of English law. The verdict broke with a long tradition according to which liability for defective products could only follow from a legal contract between two parties. But that would not have been possible if it had not been for a fundamental revision of the existing pattern of reasoning, which in turn must have required adopting a completely new perspective on the problem under consideration. In psychological terms, the judges who considered the case must have had an intuitive feeling that rejecting Mrs Donoghue’s claim would be unjust. However, something else was needed for the moral judgment to become a law: an insight that would incorporate such a verdict into the complex legal “puzzle” of principles, rules, and precedents.

⁶¹ Cf. *ibid.*, p. 46.

Almost all groundbreaking judicial verdicts can serve as examples of the mechanics of insight in legal reasoning. Let us consider the *Van Gend en Loos* case of 1963, which was a landmark case in the development of European law.⁶² The Dutch company Van Gend en Loos imported urea formaldehyde from Germany to the Netherlands. The Dutch customs charged the company a higher tariff due to a change in the classification of the substance. The company paid the increased customs but, at the same time, took legal steps in order to obtain a refund. In court, Van Gend en Loos argued that the Dutch customs regulations were contrary to Article 12 of the Treaty of Rome, according to which “Member States shall refrain from introducing between themselves any new customs duties on imports or exports or any charges having equivalent effect, and from increasing those which they already apply in their trade with each other.”

The European Court of Justice (ECJ) was faced with a serious problem when it considered the case. In accordance with the long-accepted traditional doctrine, international treaties were binding for member states only and did not apply to the citizens of the states. On the other hand, if Article 12 of the Treaty of Rome could only be cited by European Economic Community (EEC) member states in cases against other member states, the regulation would, in many cases, turn out to be an empty phrase. In psychological terms, it can be argued that the judges of the ECJ must have experienced two opposing intuitions: one following from their legal education, which suggested that Van Gend en Loos could not directly cite Article 12, and a moral one, which suggested that the Dutch authorities’ behavior was unjust.

It would be difficult to ascertain the actual reasoning on the part of the judges of the ECJ in this case; the best that we can do is to attempt to reconstruct it on the basis of the grounds provided along with the verdict. The first point raised in the grounds is that in order to answer the question whether Article 12 of the Treaty is directly effective in national laws, “it is necessary to consider the spirit, the general schema and the wording of [the Treaty].”⁶³ What is intriguing here is the order of the sources of evidence adduced by the Court, the reverse of the usual hierarchy, according to which the point of departure in interpreting the law is the language, followed by systematic arguments, cited when in doubt, and only then those pertaining to “the spirit.” This suggests that the Court decided to adopt a novel, revolutionary perspective. Further passages of the judgment seem to corroborate this hypothesis, stating that the “objective of the EEC Treaty . . . implies that [it] is more than an agreement which merely creates mutual obligations between the contracting parties.”⁶⁴ The Court’s argumentation leads to the conclusion that the “European Economic Community constitutes a new legal order of international law for the benefit of

⁶² Cf. ECJ February 5, 1963, Case 26/62, *Van Gend en Loos v. Nederlandse Administratie der Belastingen* [1963] ECR 1.

⁶³ *Ibid.*

⁶⁴ *Ibid.*

which the states have limited their sovereign rights, albeit within limited fields, and the subjects of which comprise not only Member States but also their nationals,” which is why “Article 12 must be interpreted as producing direct effects and creating individual rights which national courts must protect.”⁶⁵ This argumentation must have been preceded by an adequate insight that enabled the judges to discern the possibility of reconciling the intuitive sense of justice with the requirements following from Western European legal culture. That insight led to a fundamental revision of the understanding of European Community law.

These examples may suggest that insight is only experienced by those who make great discoveries or groundbreaking decisions. Such a view would be far from the truth though. After all, it would be strange to claim that a particular psychological phenomenon only occurred in some people and in very rare situations at that. It should rather be assumed that insights are very common, but only some of them – those concerning particularly important problems or suggesting revolutionary solutions – find their place in history books. In other words, the mental mechanisms employed so effectively by the judges in the *Donoghue v. Stevenson* and *Van Gend en Loos* cases must also be used in attempts to solve much less spectacular, mundane problems. A student who is considering a civil law case as part of an examination might suddenly realize that the plaintiff’s claim should be based on regulations concerning unjust enrichment instead of those covering breach of contract. There is no reason why such a “flash of understanding” should not be called an insight, even if the decision to cite unjust enrichment would be obvious for an experienced lawyer. An insight can apply to any type of problem: mathematical question, crossword puzzles, writing an essay, understanding clever jokes, or even how to tackle an unruly dog. Such small “Eureka moments” are part of our everyday experience.

What is an insight then? How to define it? Just as with intuition, we could refer to the various, not always compatible, understandings of the concept. Most, though not all, psychologists agree that an insight has, to a greater or lesser extent, three characteristics. First of all, it appears suddenly and is accompanied by a subjective experience of surprise or amazement. Secondly, a typical insight occurs in a dead-end situation (after a period of unsuccessful attempts to solve a problem). Thirdly, solving a problem on the basis of an insight consists in its restructuring, or viewing it from a new perspective.⁶⁶ It must be noted, however, that this characterization is sometimes questioned as it excludes certain important psychological phenomena, especially those that do not involve a cognitive impasse. For example, let us suppose that the solution to a problem suddenly appears in your mind although you are not focused on looking for it at the moment; or that you realize how a problem could be solved during the process of analyzing it, even before reaching an impasse; or that you hit upon an idea in a situation that does not involve any definite problem.⁶⁷ In

⁶⁵ Ibid.

⁶⁶ Shettleworth, 2012, pp. 217–218.

⁶⁷ Cf. Kounios & Beeman, 2014, p. 73.

fact, such situations are quite frequent, and we would probably have no doubts as to whether they could be considered insights. Moreover, there are compelling arguments to assume that such situations activate the same neural structures as other, more typical instances of insight.⁶⁸

For methodological reasons, neurobiological research on insight – or any other mental mechanisms – cannot focus on rare or unique phenomena. Such research typically involves relatively simple tasks which, however, raise no doubts as to whether they require an insight. A good example is the remote associates test (RAT), which consists in showing the participants a list of three words; the participants' task is to think of a fourth word associated with the other three. When we consider the series: "cottage – Swiss – cake," we will reach the conclusion that all three words are associated with the word "cheese," while a moment of reflection on the words "measure – video – worm" will suffice to decide that they evoke the word "tape." It is clear, then, that solving a RAT must be based on insight since the situation involves a cognitive impasse, while the answer appears suddenly and gives rise to contentment or other positive emotions; at the same time, it can be argued that this type of problem also involves some cognitive restructuring as the insight makes us aware of conceptual relations that were not clear at first glance.⁶⁹

Studies based on brain imaging techniques, especially functional magnetic resonance imaging (fMRI), have demonstrated that insight is associated with a sudden increase in neural activity in the right anterior temporal lobe.⁷⁰ Furthermore, direct stimulation of the right frontotemporal cortex combined with inhibition of activity in the left frontotemporal cortex enhances the ability to solve such problems as RATs. Studies on patients with brain injuries also clearly indicate that insight is mostly based on the neural structures of the right prefrontal cortex. This is a particularly interesting set of observations, mainly because the right hemisphere, as opposed to the left one, plays a minor role in the use of language in the normally (in the statistical sense) lateralized brain. At the same time, the right hemisphere is associated with the dominant role in such cognitive domains as creativity, artistic activity (such as music or visual arts), space perception, and facial mimicry.⁷¹ In other words, despite the fact that it leads to a reconceptualization of the problem, insight is a mechanism that largely works beyond linguistic categorization of the world.

Similar remarks can be made with regard to intuition: it has also been shown to draw mainly on the resources of the right hemisphere of the brain, especially the neural path that runs from the orbitofrontal to the inferior temporal cortex and uses the inferior occipitofrontal fasciculus.⁷² For decades, studies on intuition and insight

⁶⁸ Cf. Kounios & Beeman, 2014.

⁶⁹ Cf. Mednick, 1962.

⁷⁰ Jung-Beeman et al., 2004.

⁷¹ Cf. Kounios & Beeman, 2014.

⁷² Cf. McCrea, 2010; Volz & Cramon, 2006.

have represented two separate lines of investigation, with their own methodologies and conceptual frameworks. Recently, however, it has been hypothesized that there must be structural and functional relations between them. It seems that the interaction mainly takes place in the caudate nucleus and the occipitofrontal cortex.⁷³ An insight does not give us a new view of a problem *ex nihilo*; it uses or alters the perceptual-motor schemas that intuitive judgments are based on. The so-called incubation phase, which comes before the conceptual recombination that leads to an insight, probably involves unconscious “testing” of various solutions to a given problem on the basis of existing intuition-related schemas. An insight occurs when any of the schemas, used in an untypical or properly modified way, provides an answer.⁷⁴

If these considerations are true, intuition and insight can be regarded as two fundamental and mutually cooperating unconscious problem-solving mechanisms. Of the two, intuition is the “laborer,” an extremely efficient and constantly used tool, providing quick and relatively reliable answers to typical problems. But intuition does not halt in the face of a nonstandard problem; it is also in such cases that it provides us with clues; however, those clues may be mutually contradictory or so weak that there arises a cognitive impasse. Then comes insight, a “special-purpose mechanism,” something that allows us to break away from the rigid patterns of well-trained intuitive reactions and to implement a sometimes considerable restructuring of the existing perceptual-motor schemas. Complex legal problems where “trained” intuition proves inadequate, such as the *Donoghue v. Stevenson* and *Van Gend en Loos* cases, call for the use of insight.

1.5 THE EMOTIONAL LAWYER

Everyone would probably agree that law is one of the spheres of social life that should be characterized by objectivity and rationality. Philosophers have pointed out for centuries that we cannot construct a fair social order without breaking away from our emotions. This “deffectization” is to be a recipe for rational and balanced opinions and for right actions. The ability to look at our legal and moral obligations in an objective and emotionless way has even been proclaimed a virtue by major philosophical schools, in particular those following the course set by Immanuel Kant. Of course, there is some simplification here: if we carefully examine the works of the greatest thinkers, it turns out that they do not ignore or underestimate the role of affect in human life. However, many of them view rationality as the opposite of emotionality, even if the opposition is not a strict one. Unfortunately, the more popular or less nuanced approaches portray this opposition as even more clear and definite, thereby turning it into a kind of dogma according to which the reason and

⁷³ Cf. Zander et al., 2016.

⁷⁴ Cf. *ibid.*, 2016.

emotions are totally incompatible, with rationality being valuable and emotionality leading us astray in our cognitive efforts.

In the meantime, modern psychological research suggests a totally different scenario. Underlying the two cognitive mechanisms of intuition and insight are, to a large extent, the neural structures responsible for emotional reactions. They are not merely “additions” to the sophisticated ability of abstract thinking based on the rules of logic. On the contrary, it can be argued that those “higher” cognitive functions not only developed from the evolutionarily older emotional mechanisms; they quite literally still serve them.⁷⁵

In order to be able to look at the architecture of the human mind from this novel perspective, we must first realize that intuition and insight are not the only manifestations of the role of emotions in human cognition. Solving problems, whether theoretical or practical in nature, is connected with considerable effort (in biological terms, it requires the organism to expend a lot of energy), while the positive effects of this activity are often uncertain and delayed in time. This is an extremely interesting issue: how is it possible that we can overcome exhaustion and boredom in order to renew our efforts to gain cognitive mastery over the world? Evolutionary scientists claim that this is possible by virtue of epistemic emotions.⁷⁶ Contradiction or any other inconsistency that arises in our experience – whether it be the observation that the actual motion of Mercury is minimally different from that posited by Newton, the feeling that “it would be wrong” to decide the *Van Gend en Loos* case in the standard way, or the inconsistency between what we see (a dog) and what we hear (miaowing) – tends to arouse our interest or even trigger anxiety and disorientation. It motivates us to undertake some action and to attempt to explain the cause of the cognitive dissonance. The feeling that “something is wrong here” and that something should be done about it is the major driving force in the process that led Albert Einstein to formulate the theory of general relativity; the same force makes us strive to find a more satisfying solution to the *Van Gend en Loos* case or leads us to discover that the “miaowing dog” is our nephew’s latest toy. If it were not for epistemic emotions, there would be no – more or less significant – discoveries; getting rid of anxiety and disorientation or satiating our curiosity, and sometimes even a moment of amusement or illumination, are the awards that we receive for making our view of the world more coherent.⁷⁷

It would be wrong to assume that emotions only have a positive effect on cognitive processes, motivating us to search for ever-better solutions to the problems that we encounter. Emotions can also significantly disrupt the process of thinking; and what I mean here is not extreme situations in which strong affective reactions prevent us from “clear thinking.” What I am referring to here are the ordinary decision-making processes that occur under optimal cognitive conditions. For example, it is difficult

⁷⁵ Cf. Hurley et al., 2011, p. 63ff.

⁷⁶ Cf. *ibid.*, p. 66ff.

⁷⁷ Cf. Gopnik, 2000.

to work with two alternative, mutually contradictory hypotheses for a longer time; the mind tends to resolve such conflicts rather quickly instead of examining and systematically comparing the consequences that each hypothesis leads to. This is connected with the fact that we emotionally strive for certainty and award ourselves for it. It is hard to admit that our judgments and actions are based on more or less justified speculations rather than on firm foundations; it is easier to believe that we have achieved certainty even when, objectively, we are far from it.⁷⁸

One of the more comprehensive accounts of this phenomenon is the theory of the need for cognitive closure, first proposed by Arie Kruglanski.⁷⁹ This theory concerns our desire to obtain the ultimate answer in a given situation – it could be any answer as long as it helps us to avoid uncertainty. Kruglanski argues that individuals with a high need for cognitive closure seek order and structure in their lives, shy away from chaotic situations, desire knowledge that is reliable regardless of the circumstances, and experience sudden need for closure, which is manifested in the categorical nature of their decisions and choices; they experience discomfort in situations without closure and do not desire to confront their knowledge with alternative explanations.⁸⁰

By way of an example, let us suppose a group of subjects who are to decide the penalty for a person convicted of a petty crime are provided with information on both the aggravating and the mitigating circumstances. Half of them, however, first hear about the aggravating factors and then about the mitigating ones, while the other half receive the information in the opposite order. Those of the participants of such a study who have a high need for cognitive closure would probably be quick to form their opinions on the penalty; if they first heard about the aggravating circumstances, the mitigating factors would not affect their decisions. By contrast, those with a lower need for closure would be able to evaluate the evidence in a more balanced manner, taking into consideration all available information.⁸¹ It can also be hypothesized that individuals with a high need for cognitive closure would be more likely to apply a literal interpretation of legal regulations, without attempting to adjust their interpretations of the law to the changing social reality.⁸²

In an attempt to provide a theoretical account of such phenomena, Kruglanski and Webster point to the workings of two mechanisms: seizing and freezing. Seizing leads to accepting the first unambiguous explanation of a given situation but without

⁷⁸ Cf. Kossowska, 2005, and the literature referenced therein.

⁷⁹ Kruglanski, 1989.

⁸⁰ Webster & Kruglanski, 1994.

⁸¹ Unfortunately, Webster and Kruglanski did not conduct this experiment, but they did carry out a similar one. They presented the participants with recordings of job interviews. The conversations that the participants heard included information on both positive and negative characteristics of the candidates, with the recordings having been edited in such a way that one group of subjects first heard about the negative characteristics and then about the positive ones, while the other group received the information in the opposite order. Cf. Webster & Kruglanski, 1994, p. 1060.

⁸² This is partly corroborated by studies demonstrating a link between strongly conservative views and a high need for cognitive closure. Cf. Kossowska & Hiel, 2003.

evaluating its quality. Freezing consists in a rapid incorporation of such an explanation into the existing structure of knowledge, which makes it resistant to change; as a result, any data obtained at a later stage, which could suggest an alternative explanation, are simply ignored.⁸³ It should not take long to conclude, therefore, that a high need for cognitive closure is a trait that makes it more difficult to make the right decisions; moreover, it can result in making systematic errors and strengthening one's belief in the correctness of one's decisions. As already mentioned, systematic errors may stem from too great a confidence in heuristic-based judgments. It must be noted, however, that heuristics lead to errors in non-typical situations (i.e. ones where heuristics are not the right tool, such as those requiring statistical analysis or the application of formal logic). A high need for cognitive closure is conducive to error in a much broader scope: it can also lead to making incorrect judgments in typical situations, while at the same increasing the likelihood of reinforcing such errors.

Legal reasoning, just as any other kind of thinking, is deeply rooted in our emotionality. It is because of our epistemic emotions that we engage in cognitive effort as they whet our curiosity and award us for successful attempts to solve problems. Yet, emotions can also disturb our reasoning, especially when our "need for certitude" makes us accept claims that have not been thoroughly examined. Emotions also underlie two fundamental cognitive mechanisms that work beyond our consciousness: intuition and insight. Acquired with experience, intuition can provide us with quick and usually correct suggestions in typical problems. By contrast, insight is useful when we face special challenges; it is applied when we have to deal with a non-typical problem whose solution requires a restructuring of the existing cognitive-behavioral schemas. We can also speak of legal intuition and legal insight, but only in the sense that they are contingent upon knowledge, resulting from experience, on how to address legal problems.

Finally, we should consider one more issue. There is no doubt that emotion-based mechanisms, especially intuition, have a considerable influence on legal reasoning. The extent of that influence, however, is open to debate. Some seem to claim that we are so dependent on emotions that rational thinking is only an ornament that has little effect on our decisions. This view is endorsed by Jonathan Haidt, with the caveat that he adopts this approach with regard to moral, rather than legal, decision-making. Given the similarities between moral and legal thinking, it can be argued that Haidt's claims are applicable to legal epistemology. In his well-known essay "The emotional dog and its rational tail," Haidt argues against the view that "moral knowledge and moral judgment are reached primarily by a process of reasoning and reflection."⁸⁴ Instead, he claims that a moral judgment arises in one's consciousness in an automatic and effortless way, as a product of moral intuition, while moral

⁸³ Webster & Kruglanski, 1994, pp. 1060–1062.

⁸⁴ Cf. Haidt, 2001, p. 815.

reasoning processes are associated with effort and usually take place when the decision has already been made, only to support it *ex post*. Importantly, the aim of such reasoning is to try to offer a justification of a previously accepted, intuitive moral judgment. Of course, Haidt concedes that genuine moral reasoning can lead to the emergence of a moral judgment. Nevertheless, he contends that this is only possible in those rare situations where the original intuition is weak and the circumstances make it possible to engage in long and strenuous deliberations.⁸⁵

If Haidt were to be right, then all of the weighty tomes on the models and forms of reasoning and on the structure of legal discourse would not include any information about the methods of reasoning in law; instead they would only discuss a set of rhetorical devices that could help lawyers to defend their intuitive judgments and to influence other lawyers' – also intuitive – decisions. However, Haidt seems to go too far. It is often argued that quick and automatic moral intuitions are often informed by one's previous reasoning processes, while in situations of real moral or legal dilemmas people usually engage in deep reflection.⁸⁶ It has also been pointed out that the fact that the processes that lead to the formation of a moral (or legal) judgment are normally arational does not mean that the moral (or legal) judgment itself ought to be considered arational because it is open to debate.⁸⁷ Finally, it is claimed – in contrast to what Haidt suggests – that people are often capable of correcting their previous intuitive judgments on the basis of conscious deliberation.⁸⁸

The following chapters will focus on those means of legal reasoning that allow us to move beyond the realm of unconscious, intuitive decisions – imagination and thinking in language.

⁸⁵ Cf. *ibid.*, p. 816ff.

⁸⁶ Cf. Pizarro & Bloom, 2003.

⁸⁷ Cf. Levy, 2006.

⁸⁸ Cf. Fine, 2006.