

Legal Justification by Optimal Coherence*

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Abstract. This paper examines the concept of coherence and its role in legal reasoning. First, it identifies some problem areas confronting coherence theories of legal reasoning about both disputed questions of fact and disputed questions of law. Second, with a view to solving these problems, it proposes a coherence model of legal reasoning. The main tenet of this coherence model is that a belief about the law and the facts under dispute is justified if it is “optimally coherent,” that is, if it is such that an epistemically responsible legal decision-maker would have accepted it as justified by virtue of its coherence in like circumstances. Last, looking beyond the coherence theory, the paper explores the implications of the version of legal coherentism proposed for a general theory of legal reasoning and rationality.

In recent decades, coherence has been in vogue in a number of different domains. There have been advocates of coherence theories of epistemic justification (BonJour 1985; Lehrer 2000). Coherence theories of truth have been proposed as a main alternative to the traditional correspondence theory of truth (Walker 1989). It has also been argued that coherentist standards govern theory-construction as well as theory-choice in science (Thagard 1992). Coherence has been claimed to be a central criterion for determining not only what we are justified in believing, but also what we are justified in doing. Some philosophers have taken practical reasoning to be a matter of adjusting one’s practical commitments in the direction of greater coherence (Richardson 1994; Hurley 1989; Thagard and Millgram

* I am greatly indebted to many people who have helped me develop the ideas about coherence and law that are presented in this paper. Special thanks are due to Manuel Atienza, Scott Brewer, Noam Chomsky, Frederick Schauer, Robert Stalnaker, and Massimo La Torre. I am also grateful to Michal Araszkiwicz, Marcelo Ferrante, and two anonymous reviewers for their comments on an earlier draft of this paper. This article presents in a succinct form the main claims about coherence in law that are defended in the book provisionally titled *The Tapestry of Reason: An Inquiry into the Nature of Coherence and Its Role in Legal Argument*, to appear in the European Academy of Legal Theory Series with Hart Publishing in 2012.

1996). Prominent accounts of moral deliberation have sought to defend ethical principles on the basis of their coherence with particular ethical judgments (Rawls 1999; Goldman 1988; DePaul 1993). And psychologists and linguists have employed the concept of coherence to help understand processes as diverse as impression formation (Kunda 1999), discourse interpretation (Hellman 1995), or analogical mapping (Holyoak and Thagard 1995).

In law, coherence theories have been very popular as well. Coherentist approaches to law and adjudication have been extremely influential in contemporary legal theory. While there are different views about the proper role of coherence in a theory of legal justification, it is widely agreed that coherence is, at least, a crucial ingredient of legal justification. Current versions of legal coherentism have been exceedingly helpful in advancing the understanding of the nature of coherence and its role in legal argument. Nonetheless, there are some problems with the coherence theory in law as it is currently defended. First, coherence theories in law deal almost exclusively with the role that coherence plays in the justification of conclusions about disputed questions of law; issues concerning the relevance of coherence to the justification of conclusions about disputed questions of fact have been relatively neglected in the coherentist literature. Second, coherence theories of law and adjudication have mostly taken a normative stance towards justification and little attention has been paid to psychological evidence about how legal decision-makers reason. Such evidence is, however, critical for developing theories of legal justification that have the potential to regulate and ameliorate legal practice.¹ Last, coherence theories of law and adjudication are vulnerable to a number of traditional objections that have been raised against coherentism.

The aim of this paper is to improve on the current state of coherence theory in law by developing a coherence theory of legal justification that is potentially applicable to reasoning about both disputed questions of law and disputed questions of fact; that is duly informed by recent empirical work on reasoning and rationality; and that successfully meets (or, at least, mitigates) the objections that may be leveled against legal coherentism. In

¹ As will be explained later, the coherence model proposed in this paper endorses a version of epistemic naturalism according to which facts about how we reason are relevant to determining how we ought to reason. Psychological evidence about how we reason ought to be taken into account when developing a normative theory of legal reasoning for a number of reasons. First, a normative theory of reasoning should be duly informed by empirical data about how we reason so as to ensure that it does not require legal decision-makers to do what they cannot, given human cognitive resources. Second, a theory of reasoning that fails to take due notice of evidence about how we reason cannot be profitably used to regulate and improve legal decision-makers' reasoning behavior. Thus, current work on the psychology of legal decision-making should be taken into account in order to develop a normative ideal that is fit for us and that, because of that reason, is in a good position to regulate and improve legal practice.

a nutshell, the model I shall argue for says that a belief about the law and the facts under dispute is justified if it is “optimally coherent,” that is, if it is such that an epistemically responsible legal decision-maker might accept it as justified by virtue of its coherence in like circumstances. Whether legal decision-makers are epistemically responsible depends on whether they fulfill a number of epistemic duties and conduct inquiry and deliberation in an epistemically virtuous manner. It is a central tenet of this model that legal decision-makers reach beliefs about the law and the facts that are justified by virtue of their coherence by means of an explanatory inference. Coherence is claimed to be a matter of satisfying a number of positive and negative constraints and a standard of justification that is highly sensitive to contextual factors. Legal justification results, on this view, from optimal coherence.

The argument of this paper will proceed as follows. Sections 1 and 2 briefly review the current state of the coherence theory in law, paying attention to both theories of normative coherence and coherence theories of evidence and proof, and state some of the main problems confronting these theories. In section 3, based on an analysis of coherence theories proposed in different disciplines other than law, I present a coherence-based model of legal reasoning. This model has four components: a conception of legal coherence in terms of constraint satisfaction; an account of coherence-based legal inference as an inference to the best explanation; a view of legal justification as optimal coherence, which combines coherence considerations with requirements of epistemic responsibility, and a contextualist approach to the coherentist standards of legal justification. In sections 4 and 5, I examine the possibilities of solving the problems of coherentism identified above from within the proposed coherentist framework. While the coherence model defended in this paper builds upon the standard theory of legal reasoning, it also leads us to rethink some of the basic assumptions that characterize this theory. Section 6 discusses the possible implications of this coherence model for the general theory of legal reasoning. In the last section, I conclude by pointing out some of the problems that the proposed coherence model encounters and suggest some lines of further research in both the coherence theory and, more broadly, the theory of legal reasoning.

1. The Current State of the Coherence Theory in Law

Coherence theories have occupied a central place in contemporary reflection about law and adjudication. Most coherence theories, however, deal exclusively with the role that coherence plays in the justification of conclusions about disputed questions of law, and they neglect the role that coherence plays in the justification of conclusions about disputed questions

of fact. There is a wide variety of theories of normative coherence.² While some of them explain all there is to legal justification in terms of coherence, others give coherence a more modest role and take it to be a central contributor, albeit not the only one, to legal justification. We may thus distinguish between “strong” theories of normative coherence, which claim that coherence is both a necessary and sufficient condition of legal justification, and “weak” theories of normative coherence, which claim that coherence is a necessary but not sufficient condition of legal justification.³

Among the many proposals that analyze the notion of legal justification by appealing to coherence, three theories are particularly influential, to wit, MacCormick’s theory of normative coherence, Peczenik’s weigh and balance model of coherence, and Dworkin’s theory of law as integrity.⁴ According to MacCormick, normative coherence is the property of a set of norms that is explained by general principles which delineate a satisfactory form of life (MacCormick 1984; 1993; 1994; 2005). Normative coherence, according to MacCormick, plays an important but limited role in the justification of decisions in hard cases. Coherence arguments allow us to determine a set of “justifiable” decisions, but it is consequentialist arguments that are the final clincher of justification. In this sense, MacCormick’s coherence theory is a “weak” theory in that coherence is claimed to be a necessary but not sufficient condition of justification.

On Peczenik’s view, coherence is achieved in the course of legal decision-making by means of an operation of weigh and balance (Peczenik 1990; 1994; 1998; Peczenik and Hage 2004). Legal justification, he claims, results from the coherent weighing of a set of relevant reasons, more specifically, legal and moral reasons. Peczenik’s theory of coherence is thus a “strong” theory insofar as it takes coherence to be a necessary and sufficient condition of justification. Nonetheless, given that, in Peczenik’s view, the last step of weighing is ultimately based on personal and intuitive preferences, the potential of coherence to generate justification is significantly limited within this theory.

Last, Dworkin holds a coherence theory of justification according to which a legal decision is justified if it coheres with a structure of principles that best fits and justifies the legal practice, in the light of background political theory. Dworkin’s interpretative theory of law also involves a commitment to a coherence theory of legal truth according to which

² There are several attempts to build formal models of normative coherence. An account of these formal approaches is, however, beyond the scope of this paper. For formal approaches to coherence developed within the field of Artificial Intelligence and Law, see Bench-Capon and Sartor 2001; 2003; Hage 2001; Joseph and Prakken 2009. For a discussion of formal approaches to coherence-based theories from the perspective of belief revision theories, see Amaya 2007.

³ It is only the “strong” theories that that would qualify as “coherence theories” properly speaking in domains other than law.

⁴ For a detailed statement and discussion of these theories, see Amaya forthcoming.

whether a particular proposition in law is true depends on whether it belongs to the most coherent theory that fits and justifies the settled law. In short, in Dworkin's view, coherence with a set of interpretative beliefs about law and political morality yields both justification and legal truth (Dworkin 1977; 1985; 1986; 1996).

In the context of legal reasoning about factual issues, there is no coherence theory of evidence and proof that is on an equal footing with the robust coherence theory of the justification of conclusions about disputed questions of law. Nonetheless, there are some approaches to evidential reasoning in law that give coherence a significant role. These theories come from three different fields: evidence law, narrative jurisprudence, and law and psychology.

In evidence scholarship, there are a number of scholars who have advocated "holism" about evidence evaluation (Twining 2006). According to "holism," the mass of evidence and its probative force must be assessed as a whole. On this view, one cannot be justified in accepting an isolated piece of evidence as justified, for it is only the whole mass of evidence, hypotheses, and background beliefs that confers justification. Thus, holism implicitly relies on a "coherentist" view of justification according to which a belief is justified if it belongs to a coherent system of beliefs.⁵ A prominent holistic theory is Allen's "relative plausibility theory" (Allen 1991; 1994). The main claim of the relative plausibility theory is that "legal fact-finding involves a determination of the comparative plausibility of the parties' explanations offered at trial," where such plausibility is determined by variables like coherence, completeness, uniqueness, economy, and probability (Allen 1997, 273). Another interesting holistic approach to evidence evaluation is Pardo's pragmatic version of evidentiary holism (Pardo 2000). At trial, claims Pardo, the competing parties offer competing pragmatic interpretations of various evidentiary statements. Then, the fact-finder organizes these various statements in the form of narratives or evidentiary schemes, and chooses the best available narrative that explains these statements on the basis of "basic principles of rationality, such as coverage, coherence, and uniqueness" (Pardo 2000, 435).

The holistic theory defended by evidence scholars is supported by a number of psychological studies that show that this approach to evidence evaluation (and the coherentist epistemology upon which it is based) enjoys a high degree of psychological plausibility. A substantial part of this research has suggested that much legal reasoning about facts is a top-down process in which legal decision-makers argue from hypotheses which take

⁵ Even though there are some forerunners of holism in theoretical work on evidence as early as the 1800s, it has been only recently that holism about evidence evaluation has been developed into an influential theoretical position within legal scholarship (Abu-Hareira, 1986).

the form of stories, or narratives, to evidence. Hence, this body of research establishes that “narrative coherence” plays a significant role in legal fact-finding.

Two important bodies of research aim to clarify the role of stories in legal argument: Hastie and Pennington’s story model of juror decision-making and Wagenaar, van Koppen, and Crombag’s theory of anchored narratives, which explores the role of narrative coherence in the context of judicial decision-making.⁶ The story model posits that a central cognitive process in juror decision-making is the construction of “narrative structures” to organize and interpret the evidence (Hastie and Pennington 1991). According to the story model, jurors accept the story that, among alternative stories, best explains the evidence, i.e., the story that best satisfies the principles of coverage, coherence, and uniqueness. The main tenet of the theory of anchored narratives is that fact-finders reach their decisions in criminal cases on the basis of two judgments: judgments assessing the plausibility of the prosecutor’s narrative, and judgments about whether the prosecutor’s narrative is properly “anchored” to common sense beliefs which are generally accepted as true.⁷ Together these judgments result in an assessment of the credibility of the prosecutor’s story on which the final decision depends (Wagenaar, van Koppen, and Crombag 1993).

Both the story model and the theory of anchored narratives are psychological models of legal decision-making in which the notion of narrative coherence is paramount. Recently, an important body of research, conducted by Keith Holyoak, Dan Simon, and Steve Read, has offered a different holistic view of legal decision-making and of the kind of coherence that is relevant to it (Simon 2004). In their approach, called “coherence-based reasoning,” it is a notion of coherence as “constraint satisfaction,” rather than that of narrative coherence, that is taken to be of central importance in a descriptive theory of legal reasoning about facts. “Coherence-based reasoning” posits that legal decision-making is a process whereby decision-makers reconstruct the mental representation of the difficult and complex decision tasks that are involved in most legal cases into easy ones, yielding confident conclusions. More specifically, Simon, Holyoak, and collaborators hold that through the decision-making process the decision-maker’s mental representation of the decision task undergoes gradual change and ultimately shifts towards a state of coherence with one

⁶ Both the story model and the theory of anchored narratives owe much to Bennett and Feldman’s pioneering work on legal decision-making, in the field of social psychology (Bennett and Feldman 1981). Bennett and Feldman’s work has also had an important influence on some legal theorists’ approaches to legal reasoning about facts, such as Jackson’s. See *infra* in this section.

⁷ Examples of anchors include: “Eye-witnesses speak the truth most the time,” “pathologists almost never make mistakes,” “if a toy makes a noise someone must have stepped on it,” or “it is generally true that people rarely enter someone else’s house without the owner’s knowledge and consent with honest intentions.”

of the decision alternatives, i.e., a state at which the considerations or “constraints” that support the chosen alternative are strongly endorsed and those that support the rejected decision alternative are dismissed. At this point, the decision follows from the coherent representation with ease and confidence.

This body of experimental research provides holism about evidence evaluation with a solid empirical support. However, for the coherence theory to provide a plausible theory of evidence and proof, it is necessary to show that it is not only psychologically plausible, but also normatively appealing. Some legal theorists have proposed that coherence, of a narrative variety, is an important criterion of the *justification* of conclusions about disputed questions of fact.

There are several proposals that give an account of legal justification in terms of narrative coherence. An exceedingly interesting approach is MacCormick’s (MacCormick 1980; 1984; 2005). According to MacCormick, narrative coherence is the property of a set of factual propositions which “makes sense” as a whole. More precisely, what makes a story “coherent”—claims MacCormick—is its explicability in terms of a single set of explanatory principles of a causal and motivational kind. According to MacCormick, narrative coherence plays an important function in the justification of factual statements in law. Specifically, it functions as “a test of truth or probability in questions of fact and evidence upon which direct proof by immediate observation is unavailable” (MacCormick 1984, 48). MacCormick’s suggestion is thus that a fact-finder is justified in accepting the hypothesis about the facts under dispute that best coheres with the evidence at trial and a set of explanatory principles.

In contrast to MacCormick, other legal theorists have advocated a broader view of narrative coherence according to which it is a standard of legal justification that is relevant to *both* normative and factual questions. Jackson’s narrative model of adjudication is a major representative of this view (Jackson 1988). The main tenets of Jackson’s narrative model of adjudication are as follows: (i) The major premise of the normative syllogism conceals a narrative form; (ii) the minor premise is also constructed as a narrative; and (iii) the relationship between the major and the minor premise should be conceived as one of coherence or pattern matching. Thus, in this view, the operation of adjudication involves mainly a comparison between the narrative construction of the facts and the narrative model underlying the rule of law to be applied.

Undoubtedly, the coherence theories of both normative and factual coherence briefly reviewed above have significantly advanced the understanding of the nature of coherence and its role in legal argument. Nonetheless, there are a number of serious problems that still remain open in the current state of the research, which I turn now to examine.

2. Drawing a Map of Problems

Coherence theories in law face a number of serious problems. Interestingly, these problems confront both coherence theories of the justification of normative judgments as well as coherence theories of the justification of evidentiary judgments. In other words, the problems of coherentism about both normative and factual issues in law are similar in structure. The problems are the following:

- (i) *Vagueness*. The first problem of coherence theories in law is the problem of vagueness. Coherence theories in law leave the notion of coherence mostly undefined. Theories of normative coherence rely on a notion of coherence that is too vague for the purposes of legal justification.⁸ And the theories of fact-reasoning in law appeal to a notion of narrative coherence that is also poorly specified. As a result, these theories do not provide a clear criterion for selecting one explanation of the facts under dispute as justified among alternative competing explanations at trial.
- (ii) *Holism*. Secondly, theories of coherence in law are committed to an unrestricted version of holism. Theories of normative coherence endorse the view that it is the “whole” system of beliefs about the law and political morality that confers justification (Dworkin 1986, 253; Peczenick and Hage 2004). Similarly, coherence-based approaches to factual reasoning in law take the decision-maker’s “whole” body of empirical beliefs to be relevant for the justification of any belief about the facts under dispute. This wholesale holism is highly problematic. First, it is psychologically implausible because “global computations of coherence” of the sort that current coherence theories require are beyond the memory capacities and cognitive resources of legal decision-makers (Levenbook 1984; Kornblith 1989). Second, it is also descriptively inadequate, because legal decision-makers do not typically bring to bear all their beliefs when solving a particular legal problem. And last, it is also normatively troubling (Plantinga 1993). In the context of reasoning about disputed questions of law, it makes the justification of a legal decision decisively depend upon the coherence of some subset of moral beliefs. In the case of factual reasoning, it allows decisions to be made on beliefs other than those which the decision-maker is

⁸ The most important effort at precisely determining what normative coherence requires is Alexy and Peczenik’s (Alexy and Peczenik 1990). Alexy and Peczenik formulate a number of criteria of coherence against which the coherence of a set of normative propositions may be evaluated. However, without an account of how the different criteria may be balanced against each other, the theory remains in an important sense incomplete.

warranted in asserting on the basis of the proofs at trial (Twining 2002, 80; Taruffo 1992, 288–9).

- (iii) *Circularity and Conservatism.* Third, there are problems related to the structure of coherentist justification, most importantly, the problem of circularity and the problem of conservatism. It is a main objection against coherence theories of legal justification that they involve a vicious circularity. Steps should be taken to show that theories of normative coherence do not lead one to accept a particular legal principle on the basis that it best coheres with a body of precedent, while making the justification of such a body depend on its coherence with this very same principle (Moral 2003, 319). In the context of reasoning about facts, it is necessary to show that coherence theories do not license an inference from a belief in a particular piece of evidence to a belief in a particular hypothesis, while holding the hypothesis justified by virtue of its coherence with the same piece of evidence that prompted us to entertain the hypothesis in the first place (Wagenaar, van Koppen, and Crombag 1993, 211). Another problem with a coherentist account of legal inference is the problem of conservatism. Coherence theories of justification have an in-built conservative tendency insofar as they make the justification of new elements depend upon their coherence with a pre-existing structure (Williams 1980). This conservative tendency is an obstacle to normative change and, in morally deficient systems, it leads to perpetuating injustices in the name of coherence (Raz 1986; Wacks 1984). In the factual domain, the conservatism inherent in coherence theories may lead to interpreting incoming evidence so as to make it coherent with previously formulated hypotheses, or, in the worst scenario, it may even conduce legal decision-makers to blatantly disregard new evidence on the grounds of its incoherence with the hypothesis they favor (Simon 1998).
- (iv) *What is coherence-based inference?* A fourth problem facing current coherence theories in law is that there is no clear account of the inference patterns that legal decision-makers may use while seeking coherence in law. That is, current coherence theories in law are incomplete in that they fail to specify the mechanisms whereby legal decision-makers reach the most coherent interpretation of the law or the most coherent explanation of the facts under dispute.
- (v) *Why coherence?* Last, there is the question of why coherence should play any role in either the justification of conclusions about disputed questions of law or the justification of conclusions about disputed questions of fact. This is a “second-order question.” The problem is not one that has to do with the issue of how coherence justifies, but rather the problem is “why” coherence should be endorsed with justificatory force in the legal setting. While the current legal litera-

ture on coherentism does pay some attention to this problem, still a thorough account of why coherence is a value worth pursuing in law is missing in the current state of the coherence theory in law.

With a view to solving the foregoing problems, I then set to develop a coherence model of legal reasoning, taking as a starting point an analysis of coherence theories proposed in fields other than law. I pick among the diverse perspectives on coherence that have been defended in a variety of disciplines the elements and themes that I take to be valuable in thinking about coherence and law (for a thorough discussion of these theories see Amaya forthcoming). These elements constitute the building blocks for constructing a coherence model of legal reasoning that has the resources to address—or, at least, to mitigate—the main problems besetting current coherence theories of law.

3. The Elements of Legal Coherentism

The model that I shall argue for has the following four components: a concept of legal coherence in terms of constraint satisfaction; an account of coherence-based legal inference as inference to the best explanation; a view of legal justification as optimal coherence; and a contextualist approach to the coherentist standards of legal justification. Let me briefly explain each of the elements which I take to be essential to a viable coherence theory of law and adjudication.

3.1. Legal Coherence as Constraint Satisfaction

The first ingredient of the coherence-based model of legal reasoning is a view of legal coherence as constraint satisfaction. According to the conception of coherence as constraint satisfaction, developed by Thagard, coherence is a matter of satisfying a number of positive and negative constraints among a given set of elements (Thagard and Verbeurgt 1998). This conception may be fruitfully applied to elucidate the notion of coherence that is at work in legal argument. We may distinguish between “factual” coherence, that is to say, the kind of coherence that is relevant to the justification of conclusions about disputed questions of fact and “normative” coherence, which is the kind of coherence that is relevant to the justification of conclusions about disputed questions of law. I suggest that both factual and normative coherence may be modeled upon Thagard’s theory of the justification of epistemic and moral beliefs, respectively (Thagard 2000). However, some modifications are necessary in order to make Thagard’s theory responsive to the specificities of the legal context.

Factual coherence requires the interaction of the same kinds of coherence that are relevant to epistemic justification (i.e., analogical, conceptual, perceptual, deductive, and explanatory coherence) with one major addition, i.e., deliberative coherence. Deliberative coherence needs to be added because evidential reasoning in law is, ultimately, part of an instance of practical reasoning about whether one should acquit or convict. Each of these kinds of coherence is further specified by a number of principles. Among these kinds of coherence, explanatory coherence is the main contributor to the justification of conclusions about disputed questions of fact. According to the principles of explanatory coherence, coherence is a symmetrical relation; positive constraints arise from relations of analogy and explanation and negative constraints arise from relations of incompatibility and contradiction; elements (i.e., hypotheses and evidence) are accepted if so doing maximizes coherence, with priority being given to propositions describing evidence. A number of institutional constraints, deriving from the presumption of innocence and the standards of proof, also have to be added to the principles of explanatory coherence so as to account for the institutional nature of evidential reasoning in law.

Normative coherence requires the integrated assessment of the same kinds of coherence that are involved in moral justification (i.e., conceptual, perceptual, explanatory, deliberative, analogical, and deductive coherence) with one major addition, namely, "interpretative coherence." This kind of coherence has to be added because legal reasoning is first and foremost an interpretative kind of reasoning. Interpretative coherence is, I argue, the most important contributor to the justification of normative propositions in law. The principles of interpretative coherence are structurally analogous to those of explanatory coherence, with positive and negative constraints holding between interpretative (rather than factual) hypotheses and "normative elements" (i.e., precedents, principles, and so on), which play a role in computations of interpretative coherence similar to the role that evidence plays in computations of explanatory coherence.

The analysis of legal coherence as constraint satisfaction suggests a unified view of legal inference. Both factual and normative coherence share a common structure, even if the relevant constraints and elements differ, as well as the kinds of coherence that are involved. The picture of legal inference that emerges is this. Legal inference is a process of coherence maximization that has the following steps: (1) the identification of a "base" of coherence, that is, the set of elements upon which the coherence calculation is performed (Raz 1992); (2) the construction of a "contrast set," that is, the set containing a number of plausible decision alternatives;⁹ (3) the pursuit of the decision alternatives by means of a number of coherence-enhancing mechanisms; (4) the evaluation of the different

⁹ The term "contrast set" is borrowed from Josephson 2002, 293.

decision alternatives against the criteria of factual and normative coherence; and (5) the selection as justified of the decision alternative that best satisfies the coherence constraints established by the theory of the relevant kinds of coherence, most importantly, explanatory coherence, in the case of reasoning about facts, and interpretative coherence, in the case of reasoning about norms.

This process of coherence maximization is best described as an “inference to the best explanation,” in which legal decision-makers generate a number of alternative explanatory and interpretative hypotheses and then select as justified the one that is best, that is, the one that best coheres. This brings us to the second element of the model I am proposing, that is, a conceptualization of coherence-driven inference in law as an “inference to the best explanation.”

3.2. Inference to the Best Legal Explanation

Coherence, I would argue, is sought in the course of decision-making by means of an “inference to the best explanation” (Amaya 2009). Inference to the best explanation is the pattern of inference whereby explanatory hypotheses are generated and evaluated (Harman 1965; Lipton 2004). Thus, the claim is that legal decision-makers reach justified beliefs about the law and the facts under dispute by first generating a number of alternative interpretative and factual hypotheses and then by selecting one of them as justified. On this view, legal inference is a two-stage procedure, it is eliminatory in nature, that is, it works by exclusion, and it is a defeasible type of inference, for it is, of course, always possible to discover an even better explanation that defeats the hypothesis that has been chosen as best.

Coherence plays an important role in both the generation stage and the selection stage. In the generation stage, for instance, coherence with background beliefs helps restrict the set of alternative hypotheses to be further considered. Hypotheses that wildly incohere with our empirical and normative beliefs are not considered plausible enough to make it to the selection stage. Coherence also has an important role to play in the selection stage in that it provides us with the standards of evaluation against which we may determine which, among a set of alternative explanations, is best. The suggestion is that the “best” explanation in law is the explanation that best satisfies a number of coherence constraints, as established by the principles of factual and normative coherence.

The picture of legal inference that emerges, while attractive, is not without problems. In my view, the most important problem that a model of inference to the best explanation in law has to face is the so-called “problem of underconsideration” (Van Fraassen 1989). The problem is the following. On a model of inference to the best explanation, legal inference works by exclusion. This makes it the case that legal justification is, at least,

partly dependent upon matters of discovery. But the problem is: what if we are not good enough at discovery? What if the best explanation is the best of a “bad lot”? The objection is that we have no reason to accept the best factual or interpretative hypothesis as justified, because the true account of the facts under dispute or the best interpretation of the legal materials might well lie among those alternatives we have overlooked. This problem is, I believe, to be taken seriously. The suggestion that I shall argue for is that wedding a “responsibilist” conception of justification to a model of inference to the best explanation helps us meet the objection from the bad lot (Pryor 2001). In short, the claim is that if one has constructed the set of alternative hypotheses in an epistemically responsible way, then one is justified in believing the best factual or interpretative hypothesis, and therefore the objection from underconsideration is undermined. I shall refer to the hypothesis that an epistemically responsible legal decision-maker would have identified as “best” as the “optimally coherent” one. Let us now spell out the idea of “optimal coherence,” which, according to this model, is at the core of the notion of legal justification.

3.3. *Coherence and Epistemic Responsibility*

The third element which is arguably vital for a coherence theory is the idea that judgments of epistemic responsibility have an important bearing on attributions of justified belief about the law and the facts under dispute (Amaya 2008). More specifically, the thesis is that an interpretative/factual hypothesis in law is “optimally coherent,” and thus justified, if it could be the outcome of an epistemically responsible process of coherence maximization. Epistemic responsibility, I would argue, is a matter of fulfilling a number of epistemic duties and exercising a number of epistemic virtues in the course of legal inquiry and deliberation (Feldman 2002; Zagzebski 1996, 114; Montmarquet 1993, 23ff.). Examples of epistemic duties that are relevant to coherence-based legal reasoning include, among others, the duty to seek out more evidence about propositions that are less than certain on one’s evidence and the duty to believe only those propositions that are supported by the evidence one has. In the context of legal inquiry, epistemically responsible behavior requires the exercise of virtues such as thoroughness, perseverance in following a line of inquiry, and open-mindedness in collecting and appraising evidence. Important virtues in the context of legal deliberation include openness to new alternatives, readiness to consider objections to one’s preferred alternative, and the ability to imagine how the different alternatives are likely to affect the parties involved.

Now, a question arises at this point. How much diligence is necessary to be “diligent” in the legal context? How much evidence is enough to satisfy one’s duty to seek out evidence? What level of care is necessary for one to

behave in an epistemically responsible way? A responsibilist account of legal justification is incomplete unless we have some way of determining the level of scrutiny that is required for legal justification. My suggestion is that contextual features help us determine the appropriate level of care, and thus, help us fix the severity of the standards of legal justification. This contextualist element is the fourth and last of the components of the coherence-based model I am arguing for in this work.

3.4. Coherence in Context

Contextual factors, I contend, are exceedingly relevant to assessments of coherence. When it comes to coherence, context is the clue (Margolis 1984). The basic idea that I think needs to be incorporated within a coherence-based account of legal justification is that standards of legal justification vary with context (DeRose 1999). Some contextual factors seem to be particularly relevant for establishing the severity of the standards of legal justification. The role, the stakes, methodological and dialectical constraints, the goals, and the resources available play a chief role in determining the appropriate level of scrutiny (Williams 2001). For example, in most legal systems, the standards of justification are raised when the costs of being wrong are very high, as in cases that involve serious criminal offenses. The claim is thus that contextual mechanisms play an important role in setting the severity of the standards of legal justification.

Coherentist standards of legal justification may be lowered or raised along three dimensions: the domain of coherence, the constitution of the contrast set, and the degree of coherence required for justification.¹⁰ For instance, one's occupation and expertise help determine the appropriate domain within which coherence ought to be sought. While seeking coherence among a substantial body of belief about the law and political morality may be required in the context of legal or moral theory, it is coherence within a much narrower domain that yields justification in the context of legal decision-making. How many alternatives a legal decision-maker ought to consider for a decision to be justified also depends on context. For example, methodological constraints shape the pool of alternatives by making some alternatives salient and by making it proper for legal decision-makers to exclude certain hypotheses from consideration. While the hypothesis that a witness hallucinated that certain criminal

¹⁰ Features of the context impose not only a lower limit to what counts as justified, but also an "upper limit," which ensures that the level of scrutiny is not raised in the absence of a particular reason to do so. Given our limited cognitive resources as well as time constraints (which are particularly visible in the forensic context), it is important to avoid doing extra-work which is not needed for the justificatory task at hand. There are "epistemic transaction costs," as Fogelin puts it, involved in raising the standards of justification, which, like most costs, we prefer not to incur (Fogelin 2003, 123–4).

events took place is a hypothesis that needs to be ruled out in the context of epistemological inquiry, it can obviously be ignored in the forensic context. The severity of the coherentist standards of justification may also be fixed by way of lowering or raising the degree of coherence required for justification. For instance, while a particular account of the facts under dispute might be coherent enough to justify a directed verdict for the plaintiff in a civil case, it may fall below the threshold of coherence the satisfaction of which is required to find against the defendant in a criminal case.

To sum up, the model I am arguing for posits that a factual or interpretative hypothesis is justified if it is such that an epistemically responsible legal decision-maker might have accepted it as justified by virtue of its coherence in like circumstances.¹¹ We reach this “optimally coherent” solution to a factual or normative problem in law by a process of inference to the best explanation. Coherence is, on this model, a matter of constraint satisfaction and a standard of justification that varies with context. Let us now see how the problems of coherentism which I have identified above may be addressed within this coherentist framework.

4. The Problems of Coherentism Revisited

As stated before, there are five main problem areas for current coherence theories in law. The force of these objections, I submit, may be significantly diminished when directed against the coherentist approach of legal reasoning articulated above. A conception of legal coherence as constraint satisfaction shows how the first problem mentioned before, that is, *the problem of vagueness*, may be overcome. A conception of factual and normative coherence in terms of constraint satisfaction provides us with a set of clear criteria against which the coherence of different decision alternatives may be compared and evaluated.

The problem of circularity only arises if one accepts a linear account of inference according to which justification involves a chain of beliefs along which justification is transferred. However, the model proposed rejects this “pipeline model”¹² of justification and endorses a holistic view according to which the justification of any interpretative or factual hypothesis depends on its coherence with the rest of elements. In addition, this model assumes that relations of coherence are symmetrical, and thus that two elements

¹¹ It is important to note that the proposed account of legal justification is counterfactual, in that it makes the justification of a legal decision depend on whether the decision could have been accepted as justified by an epistemically responsible decision-maker, rather than on the actual process whereby the decision was reached. The latter would be relevant for assessing whether the decision-maker was justified in taking her decision, but not to the determination of the justificatory status of the decision.

¹² The phrase is Shogenji's (2001).

that cohere with one another are mutually interdependent, not that one is inferred from the other. Thus, this theory avoids the problem of circularity that is endemic to coherence theories by showing how evidence and factual hypotheses, on the one hand, and normative elements and interpretative hypotheses, on the other, mutually support each other.

This model also allows us to put worries about *conservatism* to rest. In the context of fact-reasoning in law, it averts the risk of failing to give evidence its due in determining what factual hypothesis we should accept because the model gives priority to the evidence at trial over the rest of the elements. It is, of course, still possible to discard evidence, if this maximizes the coherence of the whole set. But this is as it should be: After all we do have occasionally good reason for doubting the reliability of the evidence offered at trial. However, the model ensures that, unless coherence overwhelmingly requires it, evidence at trial will be accepted, and thus that it will have a momentous role in determining which hypothesis about the facts under dispute we should accept as justified. In the context of normative reasoning, the model gives priority to propositions that describe reasons from authority. In so doing, it does sanction a conservative tendency, in that it makes fit with the body of authoritative materials an important condition of justification. Now, to give reasons from authority a privileged status is indeed part and parcel of what it means to be engaged in "legal" reasoning in the first place. It cannot be a problem for a coherence theory that it recognizes the prominent role that such reasons play when justifying normative conclusions in law. It would be a problem though if such a conservative tendency prevented normative change. However, the model allows for such change when necessary, for it permits reasons from authority to be rejected when so doing significantly increases the coherence of the overall set of reasons. Thus, the theory exhibits a moderate kind of conservatism which is, I think, a distinctive characteristic of our practices of legal justification.

This coherentist theory overcomes the *problems deriving from holism* by embracing a contextualist approach to the standards of legal justification, according to which the set of beliefs over which the coherence calculation is performed is not the whole system of one's beliefs but rather a subset that is shown to be relevant in the particular context. This contextual approach to coherentist justification brings the model closer to what legal decision-makers may achieve, given their cognitive resources, improves the descriptive adequacy of the theory in that it better portrays the reasoning processes whereby justified decisions are reached in the forensic context, and dissipates some of the normative worries that holistic coherentism raises, insofar as it makes the justification of any single belief about the law or the facts depend exclusively on the coherence of a relevant subset of beliefs.

Another problem for coherence theories in law is that they lack a *detailed account of coherence-driven inference*. The model proposed overcomes this problem by providing an account of the inference patterns whereby legal decision-makers reach conclusions justified by virtue of their coherence in terms of inference to the best explanation. There is indeed a lot of work to be done to elucidate the mechanics of explanatory inference in law. However, the model of inference to the best explanation provides a fairly detailed description of the way in which coherence-based inference in law works.

Last, coherence theories in law do not provide a thorough account of *why coherence should be sought after* in the legal context. Given the problematical relationship between coherence, truth, and correctness, doubts may be raised about why coherence should be endorsed with justificatory force in law. In order to answer this question, it is necessary to engage in a second-order debate about whether coherence standards of legal justification may themselves be justified. In other words, it is necessary to give a meta-justification of coherentist justification. What are then the reasons for pursuing coherence while reasoning in the legal setting?

5. The Reasons for Coherence

A defense of the value of coherence in law starts, I would argue, by questioning an assumption, implicit in discussions on justification, about what makes standards of justification valuable. It is generally assumed that standards of justification are adequate to the extent that they are appropriately connected with truth. The justificatory role of coherence in the legal setting is then called into question by shedding doubts about its truth-conduciveness. However, while, to be sure, truth-conduciveness is a crucial standard for assessing the adequacy of a theory of justification, there are also other criteria relevant for establishing the adequacy of such a theory. I suggest the following arguments in support of a coherence theory of legal justification:

- (i) *The argument from foundationalism*. An initial reason for endorsing a coherence theory of justification such as the one proposed here is a negative one. Given the enormous difficulties that the main competing account of justification, that is, the foundationalist account, encounters not only in law but in many other domains, such as epistemology and ethics, a coherentist alternative seems initially attractive, even if some positive reasons need to be given in its favor (BonJour 1985; Williams 1999; Timmons 1999).
- (ii) *The argument from the truth-conduciveness of coherence*. A cursory look at coherence theories across domains makes it clear that there is no conclusive argument to the effect that coherence and truth are

connected in the right way. However, that there is no such a conclusive proof does not mean that the prospects of showing that coherence is properly (albeit not conclusively) connected with truth are hopeless. Quite the contrary. There is an array of different strategies for showing that coherence among our empirical beliefs connects up with truth as correspondence in the right way (BonJour 1985, 169ff.; Lehrer 2000, 132ff.; Thagard 2000, 78ff.).¹³ These strategies provide a useful starting point for mounting an argument to the effect that accepting factual propositions in law by virtue of their coherence is likely to advance the goal of truth. The problem of the truth-conduciveness of coherence is much less acute in the normative domain than in the factual one, given that non-realist accounts of the truth of normative propositions are mostly viewed as more plausible than non-realist accounts of the truth of empirical propositions, and that coherentist standards of justification are less problematically combined with non-realist views of truth than with views of truth as correspondence. Thus, the problems of connecting up coherence and truth do not, in principle, present any serious obstacle to analyzing the justification of normative propositions in law in terms of coherence. Therefore, while it cannot be shown that endorsing a coherence theory of justification of factual and normative propositions in law will never misguide us, for it may certainly lead us to accept beliefs about the law and the facts that are nevertheless incorrect or false, still there are good reasons for supporting the desirability of coherence methods from the perspective of advancing the goal of truth in law.

- (iii) *Coherence and emotion.* As recent research has established, emotions are an important component of reasoning about both what to do and what to believe, as much in law as in any other domain (Damasio 1994). Because relations of coherence are not restricted to propositional elements and because judgments of coherence are

¹³ The main lines of the arguments to the effect that coherence is properly connected with truth as correspondence are as follows. BonJour appeals to an inference to the best explanation. In this view, the best explanation of the coherence plus stability of a system of beliefs that meets the observation requirement (which guarantees that the belief system attributes high reliability to a reasonable variety of cognitively spontaneous beliefs) is that it corresponds (in the long run and approximately) to the external world. Lehrer introduces an externalist element in his coherentist account of justification which ensures that a justified belief is also a true belief. He claims that for a belief to be justified in a way that is undefeated, and thus, for it to be knowledge, it must be more reasonable for the believer to hold that belief than to reject it on the basis of her ultra-system of beliefs, where such ultra-system is a modified version—one that includes only true beliefs—of her system of beliefs. And Thagard gives the following indirect argument for the truth-conduciveness of coherence: Scientific theories are at least approximately true, and scientists do use coherence-based reasoning, therefore, coherence is truth-conducive.

sensitive to emotional responses, a coherence theory is better located than alternative theories to give an account of the role that emotions play in legal justification (Thagard 2003).

- (iv) *The argument from psychological plausibility.* As empirical studies have shown, a coherence theory of justification has a strong claim to psychological plausibility (Lipton 2004, 108ff.; Moravcsik 1990; Holyoak and Simon 1999). This is an important reason for preferring this theory to alternative theories of justification. To start with, from a naturalistic perspective, facts about how we reason constrain the kind of normative theories that one may advance. Coherence theories, unlike competing accounts, satisfy this naturalistic constraint. In addition, a theory of legal reasoning is expected to be able to guide legal decision-makers in realizing their task. The coherence theory, insofar as it builds upon legal decision-maker's natural reasoning processes, seems more apt to perform this guiding role.
- (v) *The argument from the dynamics of justification.* It is an advantage of the coherence theory that, unlike other models of justification, it has the resources to give an account of the dynamics of legal justification (Haack 1999).
- (vi) *The practical value of coherence.* Legal institutions are designed to advance a number of different goals, and coherence is a valuable tool for realizing some of these goals. For instance, coherence promotes successful coordination (Bratman 1987, 137; Richardson 1994, 152ff.), effectiveness (Thagard and Millgram 1996, 67), legal certainty (Moral 2003, 320), and social stability (Alexy and Peczenik 1990, 145), which are surely fundamental values in the legal context. Thus, there are important practical reasons for pursuing coherence in the legal setting.
- (vii) *The argument from conflict resolution.* Coherence is of a piece with a non-instrumentalist view of practical reasoning according to which we may rationally deliberate about ends, and not merely about what are the best means to achieve some fixed ends. That is, in law, coherence methods not only help us realize the different values that the law aims at promoting, but they also crucially help us deliberate about how to weigh and balance these values when they come into conflict. Thus, coherence is a most valuable guide to deciding among competing decisions about the law and the facts under dispute in cases of value conflict. Insofar as this is so, it importantly aids law's main function of solving conflict through argumentative means (Atienza 2006, 59).
- (viii) *The constitutive value of coherence.* Coherence is constitutive of individual and political identity (Hurley 1989, 260ff.). Legal decision-makers are thus not free to disregard a concern for

coherence because in so doing they would be refusing to determine their own identity as members of the political community to which they belong. This constitutive dimension of coherence gives us a foundational reason for valuing coherence as a guiding standard in legal decision-making.

All these arguments taken together strongly support the case for coherentism in law. Given the reasons that support a coherence model of legal reasoning and given that the problems of legal coherentism are not, as I hope to have shown, intractable, a theory of legal justification such as the one proposed here that gives a prominent role to coherence is a promising candidate for a theory of legal justification. After having articulated and defended a coherence model of legal reasoning, I proceed to examine the implications of this model for the general theory of legal reasoning.

6. Coherence, Legal Reasoning, and Legal Theory

From this model of coherence emerges a picture of legal justification that deviates in some respects from the standard view on legal justification that is assumed in much work on legal reasoning and rationality. First, this model puts forward a *non-foundationalist* conception of legal justification, for it denies that there is any set of propositions which provide the foundation upon which the justification of the rest of factual and normative propositions in law depends. Thus, this model diverges from both formal positivist accounts of normative reasoning and probabilistic approaches of factual reasoning, insofar as both of these rely on a foundationalist epistemology.

Second, this model embodies a *contextualist* view of legal justification according to which standards for the justification of conclusions about either disputed questions of law or disputed questions of fact are context-dependent. In so doing, it builds upon the contextualist elements that exist in the legal literature and deviates from much work on legal reasoning which assumes that the conditions of legal justification are the same across contexts.

Third, the model of coherence proposed puts forward a *responsibilist* account of legal justification. On this view, the standards of behavior that regulate inquiry and deliberation in the legal context have a bearing on the justificatory status of the resulting legal decisions. It follows from this view that an account of the duties and virtues of legal decision-makers should not merely be viewed as the appropriate subject of professional ethics, as is assumed in legal scholarship, but rather as a substantial part of a theory of legal justification. In addition, a responsibilist conception of legal justification opens up the possibility of developing a “virtue jurisprudence,” which is almost an unexplored

theoretical option in current legal theory (Solum 2003; Solum and Farrelly 2008; Amaya and Ho forthcoming).

Fourth, it takes *explanatory reasoning* to be the main kind of reasoning in the justification of conclusions about both disputed questions of fact and disputed questions of law. While explanatory reasoning has been discussed in the legal literature to some extent, the discussion has focused on the role that it plays in the discovery of novel factual hypotheses and relevant evidence (Schum 2002). In contrast, in the approach defended here, inference to the best explanation is a pattern of inference whereby hypotheses are not only generated but also evaluated, and which is at work in both evidential and normative reasoning in law. In this sense, it brings to light the structural parallelisms that exist between factual and normative inferences in law and paves the way for a unitary treatment of both. In addition, it invites us to reconsider the traditional focus of theories of legal reasoning on issues of justification, by drawing attention to the relevance of problems related to the context of discovery.

Fifth, this model advocates a *naturalistic* approach to legal justification, that is, it relies on a view about the relationship between normative and descriptive issues according to which facts about how legal decision-makers reason are relevant for answering questions about how they should reason (Kitcher 1992; Kornblith 1993; Leiter 1998; Allen and Leiter 2001). In this respect, it deviates from most work on legal reasoning which assumes a neat separation between the psychology of legal decision-making and issues related to the justification of legal decisions.

Last, this coherence-based model rests on a *non-instrumentalist* view of legal reasoning according to which deliberation in the legal context is also of ends. In endorsing a non-instrumentalist conception of legal reasoning, this model departs from formal approaches to legal reasoning, from some versions of the coherence theory, as well as from legal realist views which take legal reasoning to be a kind of means-ends reasoning, and it sides with some theories of legal reasoning according to which legal reasoning consists, at least partly, in deliberating about values. In this sense, the proposed model, by focusing on coherence-based inference as an important kind of non-instrumentalist inference, is meant to advance the study of the reasoning patterns whereby we deliberate about ends in law.

Hence, the coherence-based approach to legal reasoning has some features that lead us to revise, or rethink, some of the assumptions upon which the standard view about legal reasoning relies.

7. Conclusions

The version of legal coherentism developed in this paper has, I believe, some reasons to recommend it. It has a wider scope of application than other coherentist approaches to legal reasoning, in that it is meant to be

applicable to both normative and factual issues. In addition, it has a good claim to psychological plausibility, insofar as it is grounded on a conception of coherence as constraint satisfaction and, as current work in cognitive psychology has shown, much of human cognition can be understood in terms of connectionist networks, such as those used to represent constraint satisfaction mechanisms. Last, while I do not claim by any means to have solved once and for all the problems of legal coherentism, the coherence model proposed does significantly diminish the import of these problems. Nonetheless, the coherence model of legal reasoning defended in this work is not, to be sure, without problems. I would like to conclude by pointing out some of the difficulties that the proposed coherence model of legal reasoning encounters. First, there are several problems concerning the conception of legal coherence in terms of constraint satisfaction, such as the problem of generating the input to the coherence calculation or the problem of integrating the different kinds of coherence that are relevant to legal justification.

Secondly, what I have said about explanatory inference in law merely scratches the surface of the mechanics whereby coherence is sought in the course of legal decision-making. Much more needs to be said about the processes of discovery of novel interpretative and factual hypotheses in law as well as about how inferences to the best explanation confer warrant upon their conclusions in forensic contexts, to name but a couple of issues which would need to be further developed.

Thirdly, I have argued for the relevance of standards of epistemic responsibility to attributions of justified belief in law, but I have not even attempted here to examine the many problems which a responsibilist conception of legal justification would give rise to. For one, it is crucial to further investigate whether the aretaic and deontic concepts in terms of which the standards of epistemic responsibility of legal decision-makers have been defined hook up with truth and correctness in the right way.

Fourthly, a contextualist version of legal coherentism, such as the one proposed here, is open to the charge of relativism, as it holds that the justificatory status of a legal decision varies with context. It is necessary to spell out in more detail the features of context that have a bearing on judgments of coherence as well as to further specify how contexts are individualized, in order to free the coherence theory from relativist or skeptical suspicions.

Fifthly, worries may be raised about whether one can endorse a naturalized theory of legal justification while preserving its normative dimension. It has to be shown that the naturalistic program, properly understood, does not deprive a theory of legal justification of its normative ambitions.

Last, it might be argued that the model of justification proposed here assumes an over-intellectualized view of legal decision-making in that it gives a prominent place to legal decision-makers' epistemic virtues and

intellectual abilities. It would be necessary to clarify how epistemic and moral abilities contribute to sound legal judgment and, more specifically, how the epistemic and moral duties as well as the moral and intellectual virtues of legal decision-makers are related to each other.

These are some of the problems that a thorough development of legal coherentism along the lines proposed in this paper would prompt us to consider. These problems are linked to broader issues, such as the impact of work on cognitive science in jurisprudence, the defeasible nature of explanatory reasoning, the relationship between contextualism about justification and relativism in law, the implications of naturalism for the normativity of legal theory, or the relevance of virtue theory to a theory of legal justification. In this sense, these problems—and, I hope, this work—point towards potentially interesting avenues of future research in both the coherence theory in law and, more generally, the realm of legal theory.

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