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Cognitive Agendas and Legal Epistemology

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COGNITIVE AGENDAS AND LEGAL EPISTEMOLOGY

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ABSTRACT

The domain of legal epistemology is defined from two alternative perspectives: individual epistemology and social epistemology. Since these perspectives have different objects of evaluation, their judgments privilege and exclude different sets of information. While methodological individualism is concerned with justified beliefs of individual knowers, the social angle focuses on the institutional conditions of knowledge. I will show that the information that is respectively excluded by both the individual and the social concepts of legal epistemology weaken their respective evaluations. With this in mind, I will explore one new option of defining legal epistemology. This alternative is more comprehensive, in the sense that integrates the information excluded by the aforementioned concepts. My intuition is that such an alternative is more accurate because it takes into account both legal agents and institutions. Since "the devil is in the details," I will corroborate my thesis with two theories of legal epistemology, namely, Susan Haack's and Alvin Goldman's. The idea is to show that a proper function legal epistemology illuminates better the main epistemological problems of the field of law.

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I. INTRODUCTION

Let me start placing the domain of legal epistemology (LE) at the intersection of two major areas of philosophical thought: epistemology and philosophy of law. With this in mind, I provisionally define LE as follows:

> Definition 1(Provisional LE): LE is a part of the philosophy of law which applies the methods and ideas of general epistemology (GE) taking into account cognitive processes in the field of law.

This schematic definition requires some clarification. John Pollock and Joseph Cruz in *Contemporary Theories of Knowledge* suggest that the multiplicity of epistemic theories can be organized in accordance with the level of generalization in which they solve the main problems of epistemology (152). First, at the most abstract level, they place accounts that explain how knowledge in general is possible (e.g., foundationalism, coherentism or reliabilism). At an intermediate level, they classify theories which study the general cognitive procedures that contribute to epistemic processes (e.g., deduction and defeasible reasoning). Finally, at a more specific level, theories committed to the explanation of particular kinds of knowledge are placed (e.g., theories of perception, theories of the knowledge of other minds, epistemology of testimony, theories of mathematical knowledge).

Showing the specific features of LE, I will use the traditional formula of propositional knowledge—"*S* knows that *p*", where *S* is a cognitive agent, and *p* a fact or proposition. Since the acquisition of legal knowledge is highly regulated, I will show how the lawmaker accommodates this proposition. It is easier to start with *p*. Without details, GE understands *p* as a fact or proposition about the external world which could be true or false; for instance, "it is raining," "the first time that Christopher Columbus came to the Americas was in 1942," "I have

hands," "if today were not Sunday, I would have gone to work," or "I am not a brain in a vat." For LE, *p* is determined by legal descriptions of the external world. Within this field, *p* stands for propositions such as "X murdered Y," "this act was eminent domain," "the government limited civil rights," and so on. Legal epistemologists also interpret *S* restrictively. Whereas, in GE, philosophers focus on knowers in general, legal epistemologists study legal agents. Consequently, in this field, *S* is understood as participants in legal procedures such as judges, juries, prosecutors, plaintiffs, or detectives. Finally, the lawmaker also qualifies "knows". For one thing, LE is not concerned with direct knowledge, or perception. To be sure, legal agents hardly ever perceive *p*, for instance 'X murdered Y'. Instead of personal knowledge, legal agents know that *p* through information provided by partial indirect sources such as eyewitness testimonies, police testimonies, identification parades, or criminals' confessions. On the other hand, legal knowledge is incomplete because the lawmaker imposes timeline constraints on legal agents. The legal principle: "justice delay is justice denied" provides an intuitive idea of these temporal restrictions.

Going back to my preliminary definition, theories of LE have to fill in theories of GE. In Pollock and Cruz's terminology, low-level theories have to fulfill a bottom-up condition. This means that a low-level of epistemic theorization should not be isolated from the top theories. Since the justification of knowledge in a particular area presupposes an account that explains how knowledge in general is possible, a condition for the correctness of low-level accounts is their consistency to the most abstract theories (193). With this in mind, I classify the most representative theories of LE in four main methodological orientations: Bayesian-based, Coherentism-based, Foundationalism-based, and Reliabilism-based.[1]As a preliminary presentation, Bayesianism suggests that a fact-finder's belief for the existence of a fact is

[1] For a general overview see (Kaptein, Prakken and Verheij; Sinnott-Amstrong and Schauer).

justified when the evidence presented at trial increases this belief in a higher degree than the absence of such evidence. Foundationalism claims that a belief is justified if it is supported, directly or indirectly, by legal evidence. Coherentism states that events being litigated are justified if they cohere with the fact-finder's background of beliefs and the evidence at trial. Finally, Reliabilism proposes that the accuracy of legal knowledge depends on the epistemic system in which this knowledge is achieved. As a consequence, it studies the truth-conduciveness of legal procedures.

Inaccordance with Pollock and Cruz, high-level epistemic theories have to be able to deal with knowledge about different subject matters. Hence, a criterion for the correctness of these theories is their capability to provide accounts for low-level theories. It is because of this requirement that low-level epistemic theories, such as LE, are a fruitful field of philosophical experimentation; for "[d]ifficulties in constructing the low-level theories should lead to modification of the high-level theory, or in extreme cases, to its abandonment" (193).A detailed evaluation of the main theories of LE is beyond the limited scope of this paper. Rather, I will adopt the following strategy. First, I will identify the concept of LE that the aforementioned theories adopt. Second, I will group these accounts into two alternatives, either the individual or the social concept of LE. Third, I will evaluate the informational bases of the epistemic judgments made by these alternatives.[2] To be sure, Alvin Goldman in *Epistemology and Cognition* suggests that the "scope and direction of [epistemology] depend heavily on its *objects*

[2] The concept of 'informational bases of judgements' was created by Amartya Sen to evaluate theories of justice. In this case, he studies "the variables that are directly involved in assessing the justice of alternative systems or arrangements" (*Inequality Reexamined* 73). For instance, while the utilitarian approach is centralized in individual happiness, some economical analyses privilege personal income, and libertarian theories put their focal point in the basic social liberties. From his view, a deep analytical evaluation of the theories of justice not only should recognize what that theory has, but also what that theory lacks (*Rights and Capabilities* 130). This is the idea to be applied in this paper.

of evaluation. *Which* things are to be evaluated?" (3-4). Choosing their objects, theories of epistemology depend on specific sets of information, and they are independent of other groups of information. While methodological individualism depends on the evidence legal agents have, the social angle is dependent on the institutional processes of acquisitions of legal knowledge. Whereas individual LE is independent from legal institutions, social LE is free from the internal epistemic aspects of legal agents. I will show that the information that is respectively excluded by both the individual and the social concepts of LE weaken their respective evaluations. With this in mind, I will explore a new option; I will propose a proper function LE. My intuition is that such an alternative is more accurate because it takes into account both legal agents and institutions. I will present this general intuition in Chapter 1.Since "the devil is in the details," I will corroborate my thesis with two theories of LE, namely, Susan Haack's (Chapter 2) and Alvin Goldman's (Chapter 3). The idea is to show that a proper function legal epistemology illuminates better the main epistemological problems of the field of law (Chapter 4).

II. INDIVIDUAL EPISTEMOLOGY VS. SOCIAL EPISTEMOLOGY: THE RECEIVED VIEW OF LEGAL EPISTEMOLOGY

The domain of LE is defined from two alternative perspectives: individual epistemology and social epistemology. Since these perspectives have different objects of evaluation, their judgments privilege and exclude different sets of information. While methodological individualism is concerned with justified beliefs of individual knowers, the social angle focuses on the institutional conditions of knowledge. I will show that the information that is respectively excluded, by both the individual and the social concepts of LE, weaken their respective evaluations. I will explore one new option of defining LE. This view is more comprehensive in the sense that it integrates the information excluded by the aforementioned concepts. The strategy will be to dissolve the individual/social dichotomy with a definition which includes both legal agents and institutions.

A. Individual Legal Epistemology

When a legally established tribunal has to make decisions, for instance, whether X is guilty of murdering Y, it is expected that it justifiably believes in the facts which could support that decision: “Y died,” “Y was stabbed to death,” “X was with Y when Y died,” “Y was murdered by X,” and so on. Such justification does not come from direct knowledge, for the fact-finder does not perceive the events under discussion. Better yet, the parties involved in the lawsuit provide the evidence required. But, when is it rational for the trier of fact to believe events being litigated? From this concern arises the first academic definition of LE:

> Definition 2 (LEI_1): LE is a part of the philosophy of law that studies the conditions under which the fact-finder's beliefs are justified at trial.

Since this definition adopts the perspective of one of the participants in legal procedures, namely, judges or jurors, this is an individual definition of LE. However, this is not the only individual theory of LE. That is why I put "I_1" after LE. It means that it is the first version of one individual definition of LE.

Chronologically speaking, LEI_1 arose from the debate about the role that Bayesian modes of inference could play in understanding the law and determining facts at trial. To contextualize, Richard Lempert, in *The New Evidence Scholarship*, suggests the studies of legal evidence have changed from providing simple legislative comments to complex explanations of how fact-finders process evidence. From his perspective, this change is the academic reaction to two legal events, namely, the *Federal Rules of Evidence* (FRE), enacted in 1975, and the case The People v. Malcolm Ricardo Collins, 1968 (439).[1]

On one hand, FRE suggested a probabilistic interpretation of the law, mostly because of its concept of relevant evidence. "'Relevant evidence' means evidence having the tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence" (Rule 401).

On the other hand, in People v. Collins, the Supreme Court of California rejected the strategy of a prosecutor using mathematical statistics to identify a couple charged with second degree robbery. Briefly, the prosecutor used the expert testimony of an instructor of mathematics at a state college to show that "there was an overwhelming probability that the crime was committed by any couple answering the distinctive characteristics of the defendant and his wife"

[1] William Twining in *Rethinking Evidence* suggests that Lempert oversimplifies the origin of LE (245). Twining seems to be right, but for the expositive purposes of this part, Lempert's account suffices.

(500). The Court denied this argument because the prosecutor did not provide any justification for the use of the aforementioned statistics and because "under the circumstances, the 'trial by mathematics' so distorted the role of the jury and so disadvantaged counsel for the defense, as to constitute in itself, a miscarriage of justice" (502).

When these events were taken into account, scholars adopted positions, both pro and con, regarding the use of Bayesian models to explain legal fact-finding. Lempert declares himself "agnostic" about those extreme positions (450). However, he suggests that the critics have to offer alternative theories in the main areas in which Bayesianism is used (i.e., as a normative model that evaluates epistemic status and as an account that describes the legal processing of information). To be sure, Bayesianism suggests that it is rational for the trier of facts to believe events being litigated when his/her belief about the alleged facts has a higher probability than his/her previous beliefs about the same facts. This change of doxastic states, or updating of beliefs, is triggered by new evidence presented at trial (Goodman, "Quasi-objective Bayesianism and Legal Evidence" 239-241).

Critics of Bayesianism attack both, the descriptive accuracy, and the normative utility of this theory. The most important source of this criticism is studies of empirical psychology which show that legal agents are not natural Bayesian reasoners. For instance, Lance Bennett and Martha Feldman conducted an ethnographic study to understand how justice is actually done by ordinary people in criminal trials (3).These researchers observed more than sixty criminal trials in the Supreme Court of the state of Washington in King County (Seattle) for one year. This is their description of the method.

> Our observation of a trial normally involved much more than merely watching the proceedings. We generally arrived at the courthouse early in order to see the cast

> of characters assemble and prepare for the day. This proved a valuable strategy for catching bits of conversations about the case. It was useful to hear lawyers chatting among themselves, to observe discussions between lawyers and their clients and witnesses, and to hear the dialogues between jurors as they arrived at the courtroom in the morning or after lunch. We spent hours sitting in the hallways watching the parade of participants come and go […] We were fortunate to be able to have both structured and unstructured opportunities to discuss cases with participants […] This extensive feedback network made it possible to gain different perspectives about what was going on in a trial and to elicit immediate reactions to our hypothesis about what implicit practices organized judgment and communication in the courtroom. (11-12)

Two relevant conclusions were drawn from this study. Firstly, criminal trials are organized around storytelling (i.e., the parts under litigation have different versions—stories—of the alleged facts, and the trier of fact listens to these narratives and decides which is better). Secondly, the structure of legal reasoning is the structure of a story (e.g., introduction, climax and denouement).

Such story telling models of legal decision making were also put under experimentation with controlled conditions by Nancy Pennington and Reid Hastie. The results of their experiments show that legal evidence articulated in coherent stories increases the credibility of the evidence. Furthermore, it has a positive impact in the memory of the jury. Finally, it shows that judgment processes follow the prescriptions of story-telling models and not the rules of Bayesian inference (Pennington and Hastie 193-202).

Supported by empirical results like this, non-Bayesian accounts of LE were proposed. Coherentists suggest that a belief about facts being litigated is justified if it coheres with both the fact-finder's background beliefs and the evidence presented at trial (Amaya, "Justification, Coherence, and Epistemic Responsibility in Legal Fact-Finding." 307).[2] Explanationists claim that a fact-finder is rational in believing that the alleged facts occurred when this belief is generated from the litigant's narrative that better explains the evidence at trial (e.g., Allen 325-327; Allen and Pardo 233-242; Thagard 234-237).

Despite the fruitful debate for and against Bayesianism, which LEI_1 has boosted in the field of law, this definition has been criticized because of its limited view. For one thing, considering that the focal point of LEI_1's evaluations are the fact-finder's beliefs, this definition excludes the epistemic perspective of other participants in legal procedures. For the other, because LEI_1limitsits evaluations to trial, it does not include cognitive tasks performed in other procedural stages. However, the legal inquiry for the truth is not limited to trial.

To show the complexity which LE has to face, four interconnected variables are useful: the roles performed by legal agents, the stages of legal procedures, the information available for legal inquiry, and the plans of action adopted by legal agents (Anderson, Schum and Twining 115-116). To be sure, when an individual becomes a legal agent, he/she adopts different epistemic goals in accordance with his/her role. For instance, while it is expected that a plaintiff or a petitioner looks for the evidence that strengthens his/her position, a fact-finder ought to decide about the events under consideration, and an expert who testifies at trial might provide

[2] LE departs from GE in this point. From the general view, 'coherence' is understood as a probabilistic term (Plantinga 114-131). In the field of LE, it is thought that 'coherentism' and 'probabilism' are incompatible accounts (Allen 320; Allen and Brian 1527-1537; Allen and Pardo 247-261; Amaya, "Justification, Coherence and Epistemic Responsibility in Legal Fact-Finding" 307; Haack, "Epistemology Legalized" 48-49, Thagard 232; Twining "Rethinking Evidence" 245).

technical information. These general roles are specified by the procedural stage in which they are performed. To illustrate, whereas advocates in civil adversarial procedures might defeat their counterpart if they are at trial, in the pretrial stage of discovery of evidence, they have to disclose all the relevant information in their possession. It does not matter if this information is favorable or unfavorable for who discloses it. The information available for legal agents limits their roles even more. That is why a defendant could accept a plea bargain when he/she believes the prosecutor has enough evidence to determine his/her responsibility for a crime. Finally, legal agents' plans of actions also limit their epistemic ends; for instance, the grades of certainty, information required, and the belief to be justified change if a prosecutor is going to negotiate in a plea bargain or if he/she is going to accuse. To conclude, although it is true that the ultimate decision about the facts under litigation is made by either a jury or a judge, a theory of LE has to be able to deal with beliefs and evidence-handling of all the participants in legal procedures (Twining, "Some Scepticism about some Scepticism" 131).

This requirement leads to a new and widened definition of LE:

> Definition 3 (LEI_2): LE is a part of the philosophy of law which studies the conditions under which the legal agents' beliefs are justified in the different contexts of litigation understood as a total process (i.e., pre-trial, trial and appeal).

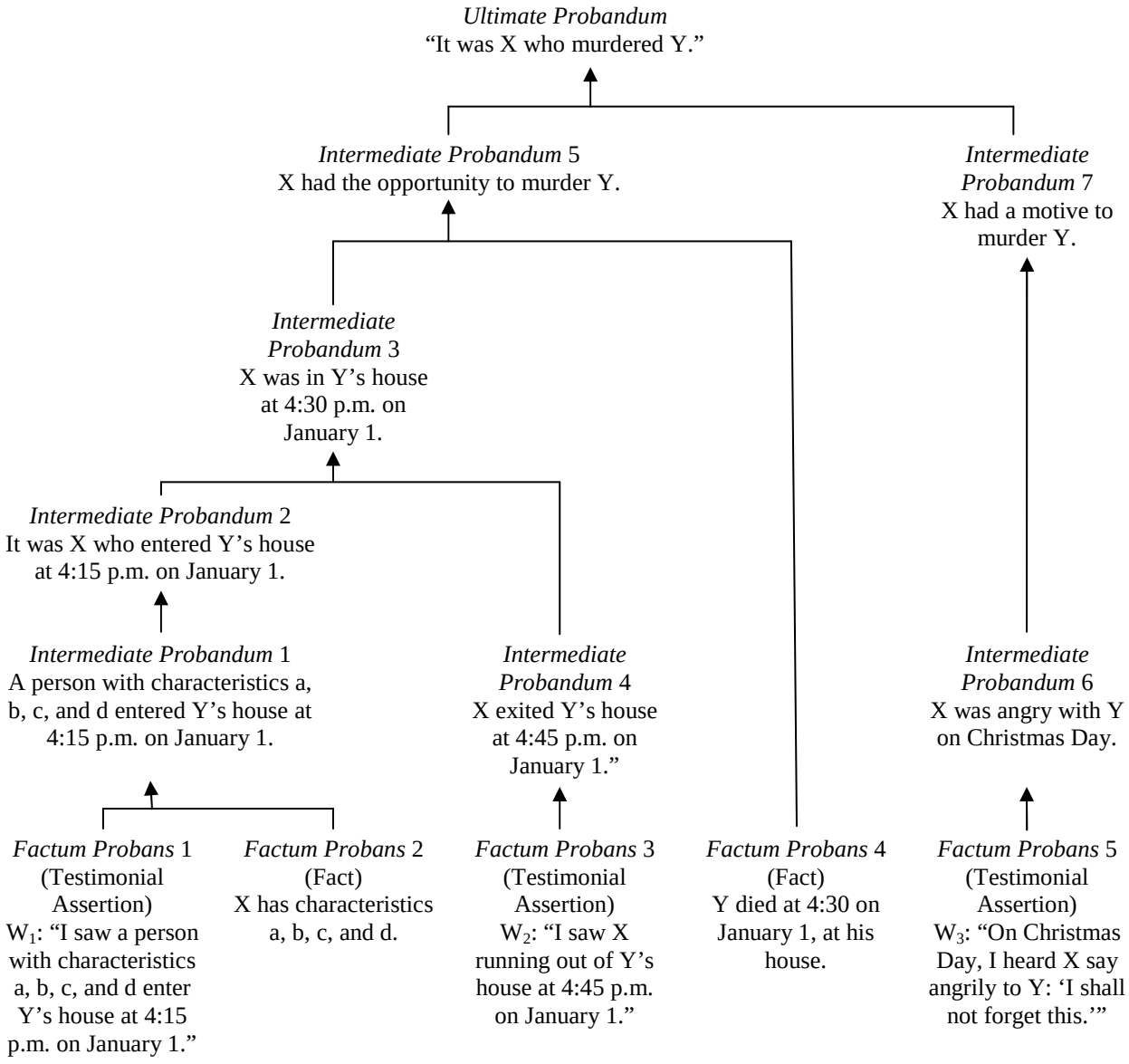
Under this definition, LE seems to understand the complexity of legal practices. LE's object is not only the justified beliefs that support the fact-finder's ultimate decision. Rather, LE scholars should study the beliefs of several kinds of agents who make different decisions related to their own duties and roles.

Facing this diversity, legal foundationalism claims that a belief is justified in the field of law if it is supported, directly or indirectly, by the legal evidence a legal agent has. Even though

one can identify different positions here, most of them admit to be inspired by William Wigmore's charts of evidence (747-756).[3]I will present Wigmore's charts with the simplified version of Terence Anderson, David Schum and William Twining in *Analysis of Evidence* (90-98; 136-139). To start with, the foundation of factual argumentation is the proposition which both establishes the evidence data introduced in the procedure and does not need justification. Following Wigmore's terminology, the *factum probans*. Two types of evidence are introduced in legal procedures: testimonial assertions made by witnesses (e.g., one witness, W_1, states "I saw a person with characteristics a, b, c, and d enter Y's house at 4:15 p.m. on January 1." Another witness, W_2, asserts "I saw X running out of Y's house at 4:45 p.m. on January 1." Finally, W_3 states "On Christmas Day, I heard X say angrily to Y: 'I shall not forget this'"), and physical evidence (e.g., The person X has characteristics a, b, c, and d. Or, Y died at 4:30 on January 1 at his house). Secondly, there is a group of propositions that is inferred from the evidence; this is the *factum probandum*. Two sorts of propositions are drawn here. The first one is the *ultimate probandum*, an argument's final conclusion, or belief to be justified (e.g., It was X who murdered Y). Since it is hardly ever possible to infer this proposition directly from the *factum probans*, intermediate propositions, or *intermediate probanda*, are required to connect the evidence with the belief to be justified. This is shown in Figure 1. In this diagram, the connections between those propositions are specified by arrows that above them, have an inferred proposition, and below them the source of this inference.

[3] The most important foundationalism theories are the Information-in-litigation Movement (Twining, *Rethinking Evidence*), the theory of the argumentative dialogue (Walton), the theory of defeasible reasoning (Prakken and Sartor) and the legal foundherentism (Haack "Warrant, Causation, and the Atomism of Evidence Law").

Figure 1: Example of Wigmore's Chart of Evidence



Twining suggests that the virtue of these chains of evidence is their level of abstraction ("Rethinking Evidence" 241). Since this tool is not a constitutive feature of cognitive agents, one can transfer it from one legal agent's evidence to the other's. Besides, this operation can be repeated along the different stages of litigation—pretrial, trial and appeal. In accordance with Twining, this level of generality makes exhaustive epistemic evaluations of all kinds of legal agents possible, within their own standpoints.

B. Social Legal Epistemology

Even though LEI_2 is right, showing that legal procedures have different sorts of cognitive agents, the participant-oriented perspective is inappropriate. LEI_2's methodology implies the isolation of legal agents; therefore, legal agents' interactions are beyond the scope of this definition. Still, legal knowledge is only achieved with the interactions between legal agents. For instance, a prosecutor knows the facts that support the accusation after he/she interacts with the police detectives and other sources of legal knowledge. Similarly, a plaintiff has to interact properly with his/her witnesses if he/she wants to succeed at trial. Finally, a trier of facts, either judge or jury, receives the evidence from the parts under litigation.

Taking into account these interactions, an alternative angle of LE departs from the individual view and suggests a social approach. From this view, legal procedures are epistemic systems "that house social practices, procedures, institutions and or patterns of interpersonal influence that affect the epistemic outcomes of its members"(Goldman, "A Guide to Social Epistemology" 18).Consider the main Western designs of adjudication, namely, the adversarial and the inquisitorial systems. While in the adversarial structure the inquiry is performed by the litigants (i.e., prosecutor v. defense or plaintiff v. defendant) who present their cases to a trier of facts (i.e., either a jury or a judge); in the non-adversarial procedure, the evidence-handling and determination is a trier of facts' responsibility. Accordingly, the epistemic aim of truth-determination varies in each system. In the adversarial procedure, this objective is attained when, for example, the respective legal institutions prevent, or minimize, the truth-distorting recollection of evidence by the parts under litigation. Alternatively, an inquisitorial procedure is

truth-conducive if, within other things, its design avoids fact-finders' preconceptions and promotes a complete inquiry of the alleged facts (Damaška 120-122). Assuming this, the definition of LE adopted by this social (S) approach is:

> Definition 4(LES): LE is a part of the philosophy of law which examines whether legal procedures are conducive to their epistemic aims.

A good instantiation of LES is Laudan's book *Truth, Error and Criminal Law: An Essay in Legal Epistemology*. Here he suggests that an ideal criminal procedure is an "*epistemic* engine" (2), for justice is only achievable through this procedure if there is a correspondence between its fact-finding and the external world. In other words, an ideal criminal procedure is a cognitive process which starts with some factual "clues and indications" and ends with a decision made by a tribunal in which factual considerations reflect what really happened. As a consequence, all the constitutive parts of criminal procedures should be truth-conducive. Unfortunately, bad designs of criminal procedures bring this "engine" to a standstill. Discovering and fixing these problems is the task of LE because, according to Laudan, it is a kind of applied epistemology and this "is the study of whether systems of investigation that purport to be seeking the truth are well engineered to lead to true beliefs about the world" (2). Two tasks, therefore, have to be accomplished by LE. First, in a diagnosis stage, it has to determine "which existing rules promote and which thwart truth seeking". Second, in a therapeutic stage, it has to propose" changes in existing rules to eliminate or modify those rules that turn out to be serious obstacles in finding the truth" (3).

Even though the institutional view of LES has a rich seam for epistemic exploration, something seems to be left out by this theory. LES focuses on the evaluation of the structure of legal procedures as epistemic systems. Consequently, this perspective does not evaluate the

epistemic performances of legal agents in the achievement of their legal duties. Yet, if legal knowledge is a consequence of the interaction of different legal agents, LE should also evaluate individual performances because they could standstill or accelerate the legal epistemic engine.

Let us follow Laudan's thought experiment and imagine a criminal procedure perfectly truth-conducive, that is, a system whose constitutive rules straightly conduct epistemic aims such as truth seeking and error avoidance (4-9). Even in this ideal scenario, it is possible that legal agents interpret wrongly the procedural legislation. Furthermore, they could perform their epistemic duties poorly. Hence, the longed for epistemic goals would be frustrated. Laudan wrongly thinks the main cause of epistemic failures in legal procedures is the legislative designs.

> I mean […] that many of the rules and procedures regulating criminal trials in the United States […] are themselves the *cause* of many incorrect verdicts. I mean, too, that the standard of proof relevant to criminal cases, beyond reasonable doubt, is abysmally unclear to all those–jurors, judges, and attorneys–whose task is to see that those standards are honored. (4)

However, the epistemic practices of legal agents also have to be evaluated. In conclusions, LE not only should assess legal institutions, but also legal practices.

C. One Alternative Definition for Legal Epistemology: Previous Intuitions

So far, I have shown the two main concepts of LE–individual and social. Each of these definitions determines both the information that should be included and the information excluded from their respective epistemic judgments. Whereas the participant-oriented perspective proposes that LE evaluates the rationality of beliefs about facts held by all participants in legal

procedures, the social-oriented perspective includes the epistemic virtues and failures of legal procedures. While LEI_1 and $_2$ exclude from the analysis both social interactions and epistemic outcomes of legal evidence-handling systems, LES overlooks the ways in which legal agents implement and develop their epistemic ends. My evaluation is that LEI_2 provides good reasons for adopting an individual view of LE. Nevertheless, it lacks reasons for excluding the institutional angle from epistemic judgments. Similarly, LES has good reasons for the social-oriented appraisal, yet it omits a strong support for the exclusion of the participant-oriented evaluation. The informational discrimination of these two definitions shows the conceptual problems of the received view. Plainly, its concepts of LE exclude elements which have to be taken into account. As a consequence, I believe that the most reasonable alternative is redefining LE, including the elements excluded from the main concepts studied in this section.

My intuition is that such a comprehensive definition is possible with a concept of cognitive agent that incorporates the institutional elements overlooked by LEI_1 and $_2$. Participants in legal procedures are not institutionally-independent individuals ─"pure" individuals so to speak. This is because they are imbued with institutional purposes and time constrictions. But they are neither institutional entities because their degrees of command of resources and the cognitive aims they seek to achieve can either accelerate or obstruct the consecution of their legal epistemic aims. To be sure, following the Practical Logic of Cognitive Systems of John Woods and Dov Gabbay, I will understand a cognitive agent as a kind of "information-processor" with a cognitive agenda or "program of action", that he/she is constrained to close, dealing with his resources (i.e., time, information and computational capacity) (*The Reach of Abduction*11-10). Accordingly, a legal-cognitive agent is an

information-processor whose agenda is legally determined, has procedural timeline constrictions and seeks and computes information that allows him/her advances or closes his/her agenda.

With this new understanding of cognitive agents, I define LE as follows:

> Definition 5 (LE): LE is a part of the philosophy of law which studies the conditions under which legal agents close their cognitive agendas.

This definition includes the elements overlooked by LEI_2 and LES, for it incorporates both legal agents and legal institutions. Besides, it provides a general concept of LE which integrates the methodological programs of individual epistemology and social epistemology. This general hypothesis will be corroborated with the individual LE of Susan Haack and the social LE of Alvin Goldman. After this, the main characteristics of my alternative will be developed.

III. FOUNDHERENTISM AND LEGAL EPISTEMOLOGY

As everyone knows, the law faces several epistemic problems. In accordance with Susan Haack, a non-restrictive list of epistemic issues includes the following questions (Q):

> Q1. What are the coincidences and divergences between the concept of legal and epistemic evidence?
>
> Q2. Can epistemology illuminate legal concepts such as reasonable doubt, the weight of evidence, the preponderance of evidence, etc.?
>
> Q3. Can epistemology provide some clarification for the debate between the "fact-based", or Bayesian, and the "story-based", or coherentist, approaches of legal evidence?
>
> Q4. Is the adversarial legal procedure truth-conducive?
>
> Q5. Are the exclusionary rules of evidence epistemologically desirable? ("Epistemology Legalized" 48-49)

So far, nothing is new. What really strikes me is Haack's discrimination of these questions. She distinguished two features within them. On one hand, whereas (Q1) – (Q3) are easy questions, (Q4) and (Q5) have an outstanding level of difficulty: "these questions are relatively small potatoes compared to the radical epistemological criticisms of adversarialism, and of exclusionary rules of evidence" which are "not-so-small -and probably uncomfortably hot- epistemologico-legal potatoes" (49). On the other hand, (Q1) and (Q3) are epistemologically answerable, but (Q2), (Q4) and (Q5) are not. Some detail is needed for the understanding of this second point.

Although legal evidence is narrower than epistemic evidence because the law is only concerned with the evidence in the legal procedure, it is clear that epistemology illuminates problems of justified beliefs (48). Consequently, (Q1) can be taken into an epistemic account. This answerability is confirmed by the contribution which foundherentism could provide for (Q3). “Though the vocabulary is different, the ideas are essentially similar: the “fact-based” approach is foundationalist in structure and spirit, the “story-based” approach coherentist; and foundherentism shows that we can combine the strengths, and avoid the weaknesses, of both theories” (48-49).

These two questions contrast with the intractability of (Q2), (Q4) and (Q5). Let me separate (Q2) from (Q4) and (Q5) in two different groups because the reasons which impede epistemology from offering answers for these questions are different in each group. Specifically, whereas (Q2) cannot be answered because of the limits, or maybe the virtues, of Haack’s theory, (Q4) and (Q5) cannot be answered by any theory of LE. From my view, (Q2) is moderately unanswerable, but (Q4) and (Q5) are radically unanswerable. I will explore the radical option first.

Why can no theory of LE provide answers for (Q4) and (Q5)? The core of Haack’s argument is the nature of epistemic evaluations. Epistemology is only able to solve problems related to epistemic values such as “honesty about what the evidence is and what it shows” (“Irreconcilable Differences?” 9). If one issue does not have epistemic values, or its epistemic values are combined with non-epistemic values, it cannot be rationally expected that epistemology illuminates it. Consequently, (Q4) and (Q5) are epistemologically unanswerable “because they involve value judgments of other kinds,” and they “are beyond the reach of purely

epistemological argument" ("Epistemology Legalized" 44). For this reason, and after trying to deal with those "hot and uncomfortable epistemological-legal potatoes", Haack states:

> Hence my conclusion: "The American Way" -the way of adversarialism and of exclusionary rules- is not an inherently bad way to determine the truth in legal disputes; but as it presently works it isn't nearly as good a way as we would ideally like it to be. In general, of course, what legal way of determining the truth will work best at a given place or time is likely to depend in complicated ways on matters of history, culture, economics, and social mores; and for our legal system to work significantly better would probably take changes not only within the system itself, but also in the larger social context in which it operates. But I will end here; for it really is beyond the competence of a "person of mere theory" like myself to offer detailed proposals about how such improvements, so desirable from the point of view of justice, might be achieved. ("Epistemology Legalized" 61)

This step back seems prudent provided that legal institutions such as the adversarial system do not have as ultimate goal to seek the truth. Assuming this, Haack, as epistemologist, should not evaluate the law. But, why does Haack think legal institutions lack that epistemic value? This question is important because it delimits the scope of LE. Due to, both, the importance of the questions and the complexity of the answer, it will be the focus of the next section. However, what has been said suffices for intuitively understanding why (Q4) and (Q5) are radically unanswerable.

Before finishing this general introduction, I will explain why (Q2) is trivially unanswerable. As it was shown in the previous chapter, due to the concept of relevant evidence

established by FRE, there is a consolidated probabilistic interpretation in the field of law. If someone expects Haack to interpret epistemic-legal concepts in this sense, then (Q2) cannot be answered from her theory. She states:

> So my answers will not be couched in probabilistic terms. My answer will draw, instead, on the account of the structure of evidence and the determinants of evidential quality I developed in *Evidence and Inquiry*, and refined and amplified in *Defending Science –Within Reason*. (Haack, "Warrant, Causation, and the Atomism of Evidence Law" 256-257)

I will show how Haack applies her foundherentism to the field of law in the first two sections of this chapter. In sections C and D, I will criticize Haak's ideas, and show how my proper function LE could solve the problems posited by Haack's theory.

A. Science and Law

Why do legal procedures lack epistemological values? Haack's arguments can be reconstructed with the next propositions (P):

P1. If the core business of one activity is not inquiry, then the core values of that activity are not epistemic.

P2. The core business of law is not inquiry.

Therefore,

P3. The core values of law are not epistemic.

Haack infers (P1) from the concept of 'inquiry'. Broadly speaking, "inquiry is an attempt to discover the truth of some question or questions" ("Epistemology Legalized" 45). The starting

point, hence, is a question which perturbs a cognitive agent. In solving this issue, he/she formulates one hypothesis and starts looking for evidence which confirms it. Not having confirmation, the agent either modifies or abandons his/her initial conjecture. When the evidence leads to the true answer under consideration, the inquirer's aim is achieved. This tracking of the evidence for the sake of the truth takes for granted epistemic virtues. For instance, it implies originality in formulating hypotheses, persistency in looking for evidence, honesty with what the evidence shows, and so on. Though inquiry is an everyday activity, it is the professional activity of "scientists, historians, detectives, investigative journalists, of legal and literary scholars, and of philosophers, among others." However, there are activities whose core is not inquiry such as "cooking dinner, composing a symphony, dancing, debating, or pleading a case before the Supreme Court" (45). For the sake of the discussion, the goal of cooking is to produce an edible meal, the aim of dancing is to move the body to the beat of the music, and the objective of pleading is to win a case. From Haack's view, since these activities are not directed to discover the truth, then the core values of these activities are not epistemic.

It is commonly accepted that inquiry is a constitutive part of legal systems because the justice that they want to achieve depends on two sides of the same coin. On one side, justice is conditioned by the application and administration of just laws. On the other side, it is a consequence of the truth determination of legally relevant facts. Therefore, the law also is one activity whose core is inquiry. Haack counterargues this position juxtaposing science and law. Since the core of science is inquiry, it provides an archetype which law would fulfill if its core were inquiry as well. Yet law does not conform to science: "If the legal system were in the same business as history, geography, or as physics and the other sciences, its way of conducting that

business would be peculiar, and inefficient, to say the least. But the law is really not in exactly the same business" ("Irreconcilable Differences?" 13).

The main differences between science and law are the following (see table 1). First, the equation of the three main elements of the concept of inquiry (i.e., question, evidence and answer) is different in science and law. A scientific method starts with a question which encourages the search for evidence that could provide an answer for the original issue. Although legal procedures also start with a question, unlike science, legal agents first provide answers to their initial questions and then look for the evidence which supports their position.[4] Second, the aim of science is to formulate, examine and answer questions which explain how the world works. Alternatively, a legal procedure is a non-violent social means of conflict resolution. To be sure, the legal procedure is aimed to produce a verdict of guilt or liability according to a body of evidence. This decision ends a dispute between two adversarial parts (e.g., prosecutors v. attorneys, or petitioners v. respondents). Third, the interest of science is not only to solve a question, but provide explanations for phenomena. Hence, the object of science is general laws which explain particular cases. Legal procedures, instead, attain their goals through particular cases. Fourth, when scientific results seem to be unsatisfactory under new evidence, scientists

[4] The expression 'questions' is differently interpreted in science and law. Scientific questions are more abstract and look for one explanation. Legal questions are specific and bolster particular legal positions. Haack illustrates the difference as follows:

> Because they are specific to a particular case or individual, the questions to which the legal system needs answers are rarely exactly the questions on which the relevant scientific work would ordinarily focus. There may, for example, be solid scientific work on the distribution of a disease or disorder in the population as a whole, and reasonable theories about its etiology, but there is unlikely to be scientific work directly relevant to whether this risk factor was a significant cause of this person's contracting the disease. Or, as in the case of forensic identification by DNA, where the relevant science is very well-warranted indeed, its application to the samples from this crime scene and this defendant introduces a whole raft of opportunities for corner-cutting, sloppiness, self-deception, and plain dishonesty. ("Of Truth, in Science and in the Law" 1002-1003)

wonder about the problems of their partial results and, if it is necessary, those are modified. In this sense, science is fallible. In contrast, the satisfaction of legal resolutions implies both prompt and definite verdicts. For one thing, extremely slow justice is not justice; for the other, constantly modified verdicts conduct to legal insecurity. In addition, double jeopardy should be avoided. Fifth, science is progressive whereas law is conservative. To clarify, scientific problem-solving dynamics are reiterative because once a scientific question is solved, a new issue is posited. This leads to progressivism because, normally, the new questions are analyzed and answered using previous results. This contrasts to the importance of the precedent for legal decision making. Circumventing the atomism of their case-based orientation, legal systems unify verdicts using previous judicial decisions as patterns for future decisions. Finally, scientific investigation is free from formalities while law establishes rituals for the resolution of social conflicts. In other words, in their investigations, scientists do not use standardized protocols. What is important is the explanatory power of their theories, not the way through which they construct them. Legal resolution of conflicts, on the contrary, homogenizes legal behavior through legal procedures. If legal agents do not follow the procedural itinerary, they cannot achieve their objectives (“Irreconcilable Differences?” 7-15; “Epistemology Legalized” 45-50; “Inquiry and Advocacy” 205-208).

Table 1: Juxtaposition between Law and Science

Science …	Law …
… formulates a question, looks for evidence, and answers the question.	…formulates a question, answers the question and look for the evidence which support this answer.
… searches for the truth.	… determines a defendant's guilt or liability.
… has investigative character.	… has adversarial culture.
… searches for general principles.	… focuses on particular cases.
… has a pervasively fallibilism (i.e., is open to revision in the light of new evidence).	… is concerned with prompt and final resolutions.
… pushes for innovation.	… defers to the precedent.
… has unlimited time for solving a problem.	… has strong timeline constrictions.
… has informal and problem-oriented investigation.	… relies on formal rules and procedures.

Someone could reply to Haack's differentiation by asserting that she is overlooking the investigative instances of legal procedures. Though the trial is the core of legal procedures, this could not be understood as a scientific investigation. However, trials are preceded by one investigative stage in which detectives, the FBI, the police, attorneys for each side, and their investigators look for evidence in determining the facts under discussion. Haack rebuts this objection, suggesting that neither police detectives nor legal, private investigators can be considered inquirers in the same sense as historians, investigative journalists or physicists. In performing their legal investigations, the detectives and legal investigators have two concerns that bias their activity: they ought to obtain evidence in such a way that it would be admissible in court ("Irreconciliable Differences?" 9, note 51), and they have the obligation of making the best possible case for their client's side of the dispute (13).

This argument leads to the conclusion that legal systems do not have as ultimate goal to seek the truth. Recall that this proposition rules out the competence of LE from answering questions such as (Q4) and (Q5). If this is true, LE should be concerned with questions such as (Q1), (Q2) and (Q3). So far, I have mentioned Haack's general strategy for solving these questions. Namely, instead of using calculus of probabilities, she studies the structure of evidence in the spirit of *Evidence and Inquiry* and *Defending Science –Within Reason*. That is,

she uses the metaphor of the crossword puzzle to explain the structure of justified beliefs in the field of law. Now I will present the details of this account.

B. The Crossword Puzzle Analogy

The best way to present Haack's account is through a question that has the same features of (Q1), (Q2) or (Q3) (i.e., an epistemic issue for the field of law which can be answered by LE within the frame of GE). Haack formulates such a question in the following terms, "Whether and if so, when and why, a congeries of diverse pieces of evidence can warrant a conclusion better than any of its elements alone" ("Warrant, Causation, and the Atomism of Evidence Law" 253; "Providing Causation" 261). In accordance to Haack, to answer this question, it is required to "determine whether, and to what degree, evidence warrants a conclusion" ("Warrant, Causation, and the Atomism of Evidence Law" 253). In other words, the issue of justified beliefs comes prior to the question of the conjoint evidence. If one understands what a justified belief is, one can understand why and when conjoint evidence provides better support for a belief than individual pieces of evidence. To show how this strategy illuminates problems of legal epistemology, let me reconstruct one of the legal cases cited by Haack: Mary Virginia Oxendine v. Merrell Dow Pharmaceuticals, Inc.

Without entering into the specific procedural details, the main issue of the case is the liability of the pharmaceutical company for the birth defects of Mary Virginia Oxendine. To expand, Mary's mom, being pregnant with Mary, took Bendectin. This medicine, manufactured by Merrell Dow Pharmaceuticals, Inc., was originally designed to alleviate the nausea which commonly accompanies pregnancy, yet it allegedly caused Mary to be born with a shortened

right forearm and only three fingers which were fused together on her right hand. The defendant denied such causal relation as strategy against his liability (Oxendine v. Merrell Dow Pharms 1102). The claim under contention can be formulated with the following proposition:

P4. The exposure to Bendectin caused the birth defects of Mary Virginia Oxendine.

Supporting this proposition, the plaintiff uses the arguments provided by an expert in teratology called "Dr. Done."[5] He believes that (P4) because of four main lines of evidence: the structural activity of Bendectin, the results of some animal or *in vivo* studies, the conclusion of one *in vitro* experiment, and some human epidemiological data. With regards to Bendectin's structure, (P4) is supported by three propositions (1104-1105):

P5. Pharmacologists are "frequently able [...] to look at the structure [of a chemical compound] and predict what kind of activity that compound will have."

This, because it is generally known that,

P6. Pharmacologists design drugs by doing (P5).

Going back to the main line of the structural argument, Dr. Done also states,

P7. It has been found that some antihistamines have teratogenic collateral effects. And,

P8. One of the three components of Bendectin, doxylamine succinate, is an antihistamine.

The defendant counterargues this reasoning insinuating that it is not sufficient for (P4),

P9. "Considered alone, the structure-activity of Bendectin did not provide a basis for [the conclusion] that Bendectin was a teratogen."

[5] 'Teratology' is defined as "the study of birth defects and malformations" (1104, note 3).

However, Dr. Done does not consider this argument in isolation. Indeed, this expert in both the direct examination and the counter-examination consents to (P9). Consequently, the plaintiff's side provides three additional paths of reasoning. (P4) is also supported by *in vivo* studies (1105-1106),

> P10. "they showed in my opinion evidence of teratogenicity in [mice and monkeys] and that would just be further evidence of the potential of the drug to produce defects."

Specifically, one study lead "by a Dr. Roll" shows the effects of doxylamine, one of Bendectin's components, on mice and rats. Another study conducted "by a Dr. Hendricks" deals with the effects of Bendectin on monkeys. Reacting against (P10), the defendant alleged that in assessing collateral effects of drugs on humans, animal studies are not reliable and cannot be conclusively generalized to humans. Dr. Done agrees with that observation, but claims,

> P11. Human studies may be better than animal studies for predicting a drug's effect on humans, but animal studies can be more controlled; this is an unquestionable advantage, from the scientific point of view.

A third line of evidence is constituted by studies *in vitro* (1105-1106). Broadly speaking, these studies allow for the isolation of specific effects in a laboratory. In this case, a study conducted "by a Dr. Hassell" shows that,

> P12. Bendectin interfered with the growth and development of limb bud cells.

Finally, Dr. Done analyzes more than twenty human epidemiological studies (1107-1108). From his perspective, those studies show that,

> P13. There is a causal relation between the medicine and birth malformations.

Indeed, one of the studies reports that 48 percent of all Bendectin-related defects observed were limb defects.

Dr. Done's argument is understood from two opposing views that I will call the atomistic and the holistic interpretations. These positions perfectly contextualize the question taken into account in this section (i.e., "Whether and if so, when and why, a congeries of diverse pieces of evidence can warrant a conclusion better than any of its elements alone."). The atomistic interpretation is made by the trial judge Joseph M. Mannon,

> In support of her case to establish proximate cause, plaintiff relies on four principal grounds. The first is the structural activity of Bendectin which included an antihistaminic component, together with the awareness that certain antihistamines have been determined to be teratogenic in certain animals. Plaintiff also relies on the animal or *in vivo* studies. The third ground involves the *in vitro* studies performed at the National Institutes of Health. Finally, plaintiff relies on human epidemiological data.
>
> It is clear to the Court from review of the evidence adduced at the trial of this action that no conclusion one way or another can be drawn from any of the above relied upon bases, respecting whether Bendectin is a human teratogen. And it is also clear from the evidence that plaintiff has failed to prove that use of Bendectin by her mother proximately caused her birth defect. (1102)

This view tries to infer (P4) from the separate four lines of reasoning. Since none of the subarguments is sufficient for (P4), plaintiff allegations were found untenable.

Disagreeing with this view, Judge Terry, who revised the case in appellation, states:

> The court must view the evidence as a whole, not in fragments. Like the pieces of a mosaic, the individual studies showed little or nothing when viewed separately from one another, but they combined to produce a whole that was greater than the sum of its parts. (1110)

This holistic interpretation of Dr. Done's argument recognizes the insufficiency of each of his lines of reasoning. However, the evaluation is not limited to this fragmented analysis; better yet, it sees the connections between the lines of evidence. A conjoint evaluation of the evidence strengthens the argument. Therefore, the plaintiff's allegations are tenable.

Haack agrees with Judge Terry, but she thinks his mosaic metaphor does not provide an explanatory answer for the problem of conjoint evidence ("Warrant, Causation, and the Atomism of Evidence Law" 256). This issue can be better illuminated with an epistemic account. In doing this, LE should turn to the concept of justified belief. How justified is Dr. Done, at the trial, in believing (P4) depends upon how good his evidence for (P4) is.

Haack proposes an analogy between a crossword puzzle and the evaluation of a body of evidence,

> How reasonable one's confidence is that a certain entry in a crossword puzzle is correct depends on: how much support is given to this entry by the clue and any intersecting entries that have already been filled in; how reasonable, independently of the entry in question, one's confidence is that those other already filled-in entries are correct; and how many of the intersecting entries have been filled in. Analogously, how good A's [evidence] with respect to p is would depend on [supportiveness, independent security and comprehensiveness]. (*Evidence and Inquiry* 82)

To understand this analogy, a previous clarification is needed. Haack classifies evidence in two broad groups, namely, reasons and experiential evidence (*Evidence and Inquiry* 80; *Defending Science* 60-65). Reasons includes propositions that can be true or false. On the contrary, experiential evidence is only true propositions. This recognizes the importance of empirical experiences for knowledge,

> This is no reinstatement of any kind of infallibilism with respect to perceptual of introspective *beliefs*; it is just that the propositions concerned are to the effect that A is in such-and-such a perceptual (etc.) state, and they are all true because, *ex hypothesi*, A *is* in that perceptual (etc.) state. This feature guarantees what may be called the 'experiential anchoring' of justified empirical belief. (*Evidence and Inquiry* 81)

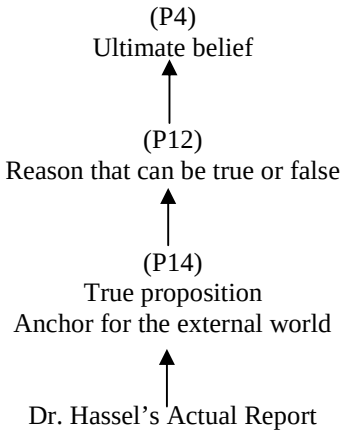
To illustrate, assume Dr. Donereads the document where Dr. Hassen claims (P12). Then, Dr. Done is in a perceptual state that constitutes Dr. Done's belief that (P12); for "Testimonial evidence, in a broad sense–what a person reads, what others tell him—enters the picture by way of his hearing or seeing or remembering, what someone else says or writes" (Haack, "A Foundherentist Theory of Empirical Justification" 137). Thisperceptual state can be stated as follows:

> (P 14) It looks to Dr. Done that Dr. Hassell states (P12).

This very perceptual state is Dr. Done's experiential evidence with respect to (P12). And, paraphrasing Haack, since a perceptual state cannot be part of the evidence unless Dr. Done is in this perceptual state, then (P14) is true ("A Foundherentist Theory of Empirical Justification" 138). Additionally, (P14) is Dr. Done's "anchor" for the external world. In contrast, (P12) can be

true or false. This last proposition is not experiential evidence, but a reason for (P4).These ideas are represented by the following diagram:

Figure 2 Differences between Experiential Evidence and Reasons



Now we can go back to the crossword puzzle analogy. From Haack's view, crossword puzzles' clues are to crosswords as experiential evidence is to reasons. The first two terms of the analogy are in a relation such as that the clues do not need justification, but the crosswords need to be justified. This support is provided by the clues, intersecting entries that have already been filled and the independent reasonability of the crossword under consideration. Haack's proposal is that experiential evidence does not need justification. It is always true. Reasons, contrarily, need some justification. They can be true or false. Therefore, as the clues, in a crossword puzzle, do not need justification, but confers justification to the crosswords, experiential evidence does not need justification, but it justifies reasons.

This justification is provided when three criteria are fulfilled. First, with supportiveness, one evaluates the relation between the evidence(i.e., reasons and experiential evidence), and the conclusion, in Haack's analogical terms, "how well [one crossword entry] fits with the clues and any intersecting entries" (64). In Dr. Done's argument, (P4) fits with the experiential evidence

(P14), provided (P12). Second, in determining independent security, it is necessary to know how solid each of the elements of the evidence is. For instance, Dr. Done evaluates the independent security of (P10) with (P11). Finally, the evidence is comprehensive if it includes all the evidence collected, relevant or irrelevant. That is why Dr. Done includes (P9) in his argument.

> These factors are not, however, quite symmetrical. Increment of supportiveness raises the degree of warrant that joint evidence gives to a conclusion. Increment of independent security, however, raises degree of warrant *if the evidence added is positive,* but lowers degree of warrant if it is negative; and increment of comprehensiveness raises degree of warrant *if the evidence added is at least as positive as the rest,* but lowers degree of warrant if the additional evidence is negative, or less positive than the rest (257).

This non-linear theory of justification seems to be more explanatory than the mosaic metaphor. Nonetheless, it does not solve properly the main problems of LE. In the next two sections, I will present my criticism.

C. Science and Law: Two Different Cognitive Enterprises

One of the central ideas of Haack's LE is that the core values of law are conflicting resolution rather than truth seeking. This allows her to ignore certain questions (Q4 and Q5) and to answer others (Q1 – Q3). I believe Haack's suggestion is wrong, for some of the premises of her argument are false. Specifically, I think (P1)is false, and although (P2)could be true, it is not because of the reasons provided by Haack. To be sure, it is possible to find activities whose aim is not inquiry, yet whose main values are epistemic. Moreover, when Haack assures that the aim

of law is not inquiry because it does not fit into the scientific inquiry, she confuses two types of cognitive enterprises.

The falsehood of (P1) can be shown using the legal procedure as a counterexample. In accordance with Goldman, theories of legal procedure can take two forms—either they are pluralistic or unified ("Legal Evidence" 163-164). Pluralistic accounts hold that legal procedures have different aims, no one of which is prior to the other (e.g., fairness, justice, impartiality, allowing pacific coexistence, seeking the truth, protection of civil rights, etc.). Unified theories, in contrast, explain procedures with reference to one main end. They do not hold that legal procedures actually achieve the selected goal; better yet, they use it as an explanatory resource to clarify the main activities performed in legal procedures. Within this second alternative, one can find pure unified theories and impure unified theories. Pure accounts state that the legal practices taken into account are subsumable in one exclusive desideratum. Impure unified alternatives defend that although the aim of legal procedures is such an exclusive aim, it is possible to recognize alternative goals coexisting with the dominant rationale.

Haack's account is a good example of one unified pure theory, for she suggests the legal system's aim is to resolve disputes deciding whether or not the defendant is guilty or liable. This desideratum leads her to exclude other values such as the seeking truth ("Irreconcilable Differences?" 12-13). One impure unified theory can be found in Goldman's account. He thinks the aim of legal procedures is to secure "*substantively just* treatment of individuals." This goal is only achieved if valid laws are correctly applied and the truth of the facts under litigation is achieved ("Legal Evidence" 164). Thus, the aim of law is not inquiry, but it does have epistemic values. Therefore, (P1) is false.

Why does Haack overlook law's epistemic values? My intuitive answer is that Haack does not clarify the structure of the cognitive agent under consideration. As a consequence, she demands the law to perform activities for which it is not designed. Since the law does not do what science is supposed to do, the law does not have epistemic values. To expand, in taking into account the structure of a cognitive agent, a theory should include three elements: the agent's cognitive target, the fulfillment requirements for that target, and the resources available for the goal at hand (Gabbay and Woods, "Logic and the Law" 175), that is, the information the agent has available, the time the agent has to achieve the objective, and the agent's computational capacity (*The Reach of Abduction* 11).

Assume Haack's characterization of science is right. In this case, science's cognitive task is inquiry. According to Haack, inquiry is formulating questions about the external world, looking for evidence, and providing answers for those questions. An example used by Haack clarifies this point. One of the most important scientific problems during the latter half of the twentieth century was "to solve the structure of DNA" (Haack, "Irreconcilable Differences?" 8). A scientific answer for that question not only has to be true, but also substantively explanatory. In other words, it ought to provide general laws, and it has to be the base for predictions. Accordingly, when James Watson and Francis Crick claimed that "the DNA is a double-helical, backbone-out macromolecule with like-with-unlike base pairs," they did capture the actual structure of the DNA. Furthermore, it provides laws for molecular biology, and it allows for the future decoding of genetic information. Achieving that high cognitive task, and fulfilling such demanding conditions, science has the capability of commanding great resources. To illustrate, Watson and Crick's DNA research group not only used the information provided by molecular biology at that moment, they also waited until the information was complete; for science does

not have time-constrictions. That is why scientific illations of information and calculations are powerful and precise.

When Haack compares this amazing cognitive performance with the legal one, she gets frustrated. First, legal cognitive tasks depend upon non-epistemic objectives such as the protection of civil rights, or the constitutional admissibility of evidence. Second, standards, such as the proof beyond reasonable doubt, allow the law to move away from the truth. The problem is not whether or not X, actually, murdered Y, but if the prosecutor can justify, beyond reasonable doubt, such a claim. Third, the information in law is less abundant, and it is biased by the perspective of the parties under litigation. Moreover, procedural timelines constrict legal decisions in such a way that they have to be made with partial information. Additionally, legal agents' reasoning in accordance to their client's side, or juries not well-educated and easy to impress by the lawyers, limit law's computational capacity. Because of this juxtaposition, Haack rules out that the law's ultimate value is to seek the truth.

Haack could replay that "this is not to deny that inquiry plays a role in the legal process […] but it is to deny that inquiry is quite as central to the law as it is to science" (12-13). However, if someone asks for a positive account for the role of inquiry in legal procedure, or for the shape legal systems should adopt improving their cognitive methods,[6] her answer is that it is beyond the scope of LE ("Epistemology Legalized" 61). Therefore, my intuition seems to be confirmed. She does not provide an account of the cognitive agent under consideration. Indeed, her claim that the core of law is "advocacy" is a consequence of a wrong generalization. She assumes the advocate's perspective and defines all law from this angle:

[6] Goldman ("A Guide to Social Epsitemology" 19; "Legal Evidence." 193; *Knowledge in a Social World* 272) and Laudan (*Truth, Error and Criminal Law* 2) suggest this is the main issue of LE.

> The advocacy that is at the core of the adversarial process is a very different matter from inquiry […] the obligation of an attorney, *qua* advocate, is to make the best possible case for his client's side of the dispute—including playing up the evidence that favors his case, and explaining inconvenient evidence away if he can't get it excluded. (Irreconcilable Differences?" 13)

Why should we privilege advocacy and not fact-finding, which is the obligation of juries, or investigation, which is the obligation of detectives? Haack does not have any answer to these questions. She adopts one perspective overlooking the complexity of legal procedures. Therefore, she does not offer an appropriate descriptive theory for legal knowledge.

D. Disanalogies Between a Crossword Puzzle and Legal Knowledge

A second problem for Haack's LE is that she suggests a normative account for legal knowledge which is not sufficient for the epistemic evaluation of legal practices. This is a problem for the crossword puzzle analogy. My point is that it is possible to dissolve the analogy because legal epistemic practices have relevant properties that differentiate it from the practice of filling out a crossword puzzle. To show this, I will schematize Haack's ideas with the following argumentative structure:

P15.C_k and C_u have P_1, P_2 … P_n.

P16.C_k also has P^*.

Therefore, by analogy,

P17.$C_u$has P^* as well (Gustason 59).

C_k and C_u represent the cases that have been analogized. While C_k is a case whose relevant properties are known by the arguer, C_u still has unknown aspects. This deficiency will be supplied by the argument from analogy. P_1, P_2 … P_n stand for the properties that both C_k and C_u have. P^* represents a property, or properties, that C_k has, and that is attributed to C_u, due to the resemblance between the cases (i.e., due to the properties they already have in common). In Haack's argument,

> P18. A crossword puzzle and legal knowledge are gradationally justified, which means that they can be more or less justified. They are not linear. That is, they are neither instantiations of mathematical proof, nor are they justified in a reiterative chain of subordinate entries, or beliefs, respectively. Finally, neither a crossword puzzle's clues, nor experiential evidence need justification.
>
> P19. In a crossword puzzle, an entry is justified when it is supported by a clue, it is independently reasonable, and it is supported by the entries already filled in.
>
> Therefore, by analogy,
>
> P20. In law, a belief is justified when it is supported by the experiential evidence, it is reasonable independently, and when it includes, both, all the evidence collected and other beliefs.

Before evaluating this argument, I have to defend my strategy, for Haack could object to my methodology assuring,

> An analogy is only an analogy, not an argument. Its role is only to suggest ideas, which then have to stand on their own feet. And there are always disanalogies;

> there will be nothing in my theory analogous to the solution of today's crossword which appears in tomorrow's newspaper, for instance, nor any analogue of the designer of a crossword. ("A Foundherentist theory of Empirical Justification" 139)

First, it is clear that an analogy is not necessarily an argument, but there are arguments whose conclusions are drawn from an analogy (Macagno, Reed and Walton 43-86). I believe this is Haack's case, for this structure perfectly captures her original ideas expressed in *Evidence and Inquiry* (81-82). Second, I suppose that what Haack means is that her analogy is not a valid argument. I agree. Actually, I accept that arguments from analogy are not conclusive (i.e., they do not logically entail their conclusions). On the contrary, these arguments will be understood as instantiations of defeasible reasoning (Pollock 481). To clarify, arguments from analogy create a *prima facie* justification for their conclusions because of the apparent similitude between the cases related. This presumption could be *ultima facie* justified, either with new positively relevant information that corroborates the initial presumption, or with the absence of relevantly negative information that weakens the conclusion. Third, following the previous argument, I am committed to agree with the point that "there are always disanalogies." Yet, I think a disanalogy only comes from relevant information, which is the information that either confirms or denies the argument's conclusion. The claim that Haack's crossword puzzle is unlike "today newspaper's crossword puzzle" is irrelevant (i.e., it does not constitute a disanalogy). What really matters is whether or not the idea suggested by Haack's analogy(i.e., in law a belief is justified when it is supported by the experiential evidence and other beliefs, when it is reasonably independent and when it includes all the evidence collected) "[stands] on their own feet" ("A Foundherentist theory of Empirical Justification" 139). And it depends upon relevant information.

I believe there are two arguments against Haack's analogy. One attacks the *prima facie* positive properties that a crossword puzzle and a legal justified belief have in common; the other provides a negatively relevant property of legal knowledge that detaches it from crossword puzzles. Firstly, in Haack's account it is not clear how experiential evidence, unlike a crossword puzzle's clues, does not need justification. In *Evidence and Inquiry*, she states, "our ordinary ways of describing 'the evidence of the senses' offer some clues. What justifies me in believing that there is a woodpecker in the oak tree? – 'my seeing it, the fact that I can see it' is a natural answer" (80). Even though, this looks as a woodpecker to me, the mere stipulation that I am in a perceptual state does not explain why experiential evidence does not need justification. The canonical example of the novice and the expert illustrates this point. Imagine two individuals, an expert in identifying birds, and a novice in this art. The two of them state "there is a woodpecker in the oak tree." Our inclination is that, whereas the expert is justified in his/her belief, the novice is not. However, Haack cannot explain this differentiation. Using her theory, the only thing we can trivially say is that the bird appeared a woodpecker for the two men. Therefore, whereas the crossword puzzle's clues do not need justification, it is not clear why experiential evidence does not need justification.

Secondly, there is an important difference between the cases analogized. The aim of a crossword puzzle is achieved when all its squares have been filled in with letters which are part of words that, both, correctly answer the clues, and fit together. In law, a justified belief held by a legal agent does not close the legal cognitive enterprise. On the contrary, a justified belief is the input for new epistemological activities. In Oxendine v. Merrell Dow Pharms, for example, the expert's testimony that "The exposure to Bendectin caused the birth defects of Mary Virginia Oxendine" (1102) was one of the inputs for the trier of fact. The trier of fact had another

cognitive task, namely, determining whether or not Merrell Dow Pharms was liable for the birth defects of Mary Virginia Oxendine. This disanalogy is important because, as it was shown in Chapter 1, legal knowledge is not achieved by isolated individuals. It is the product of social interactions. A crossword puzzle does not require social interaction for being filled in. As a consequence, this is a second defeater for Haack's analogy and her normative model of LE is untenable. This intuition will be clarified in the last Chapter of this paper.

IV. RELIABILISM AND LEGAL EPISTEMOLOGY

The narrow view of Haack's LE contrasts with the diversity of epistemic questions with which Goldman's LE deals. From his view, LE not only provides some clarification for (Q1) and (Q3), it also provides substantial answers for (Q2), (Q4) and (Q5). Indeed, Goldman thinks LE can tackle other questions such as:

> Q6. "How should legal systems channel the flow of information about particular cases so as to produce suitable judgments about those cases?" (*Knowledge in a Social World*272)
>
> Q7. "How [do] various factors of adjudication procedures affect the fact finder's success or failure at identifying the relevant material facts" (273-274)?
>
> Q8. "What degrees of accuracy [will] various adjudication systems […] promote" (279)?
>
> Q9. "How well [does] each [legal] procedure [(i.e., inquisitorial or adversarial systems of adjudication)], or each small group of procedures, function for the search for truth" (290)?
>
> Q10. "How can legal systems get the parties to disclose evidence relevant to their case" (300)?
>
> Q11. "Which evidence rules *ought* to be adopted"("Legal Evidence" 163)?

To be sure, the problem of epistemic justification associated with (Q1) is illuminated by Goldman's reliabilism. From this view, the issue is not whether a legal agent's belief is justified by the evidence, as Haack presents it, but how reliable are belief-forming procedures in the field of law. In some sense, Haack's evidentialist perspective is trivial because legal agents always

have to justify their decisions with legal evidence. In addition, the fact that a legal agent's belief is justified by legal evidence is a necessary but not a sufficient condition for legal knowledge, for "although [legal evidence] sometimes coincides with the truth, it need not do so" (Goldman, *Knowledge in a Social World* 283).

Goldman also suggests that (Q3) is resolved by a reliabilist approach of LE. Here, Bayesian updating of beliefs, coherent explanations, simple heuristics, and other processes of inference used in the field of law should be assessed for their reliability to produce truth beliefs ("Simple Heuristics and Legal Evidence"218-220).

This goal-oriented approach is also useful to grasp legal institutions such as those included in (Q2). Broadly speaking, since one of the main goals of legal procedure is the truth determination, legal institutions can be understood through the epistemic goals they promote. For instance, "the evidence standard of 'beyond reasonable doubt' is imposed in the criminal law because certain kinds of verdict errors are regarded as more serious than other kinds: convictions of the innocent are worse errors than acquittals of guilty" (*Knowledge in a Social World* 284).

Goldman, unlike Haack, thinks (Q4) and (Q5) are epistemically answerable. To recall, what prevents Haack from providing a response for these questions is her misconception that legal systems have a unique aim (i.e., the peaceful resolution of social conflicts) that exclude other desiderata such as seeking the truth. Goldman, on the contrary, thinks epistemic aims are an essential part of legal systems, even if they are not their ultimate goal. To clarify, Goldman suggests that even though the exclusionary rules of evidence contradict some epistemic principles, they could be illuminated from an epistemic account. Practically, the truth-in-evidence principle states that when more true evidence is collected, there is a better indication of the truth of the hypothesis under consideration (*Knowledge in a Social World* 292). Such a

principle is threatened by the exclusionary rules of evidence that allow the diminishment of information presented by the litigants. To be sure, FRE stipulate:

> **Rule 403. Exclusion of Relevant Evidence on Grounds of Prejudice, Confusion, or Waste of Time**
>
> Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.

This rule combines epistemic values (e.g., the tracking of the topic under consideration) with values of other kinds (e.g., timeline constrictions in protecting civil rights). LE is able to evaluate the epistemic aims that the lawmaker intended to insert in the exclusionary rules of evidence. Hence, protecting juries from confusion of issues or avoiding biased perceptions of evidence could be good epistemic reasons to exclude some evidence (Goldman, *Knowledge in a Social World* 293; "Legal Evidence" 168).

Goldman's approach not only evaluates actual institutions such as the inquisitorial and the adversarial systems of adjudication, (Q9) and (Q8), and shows how legal institutions' designs impact the epistemic performance of legal agents, (Q7), but this theory also provides methods to improve legal systems, (Q6) and (Q11), and, as a consequence, legal epistemic practices (Q10).The richness of Goldman's LE is a consequence of the application of both his reliabilist GE and his social LE. The original way in which these epistemologies are combined will be presented in the next section. After this, the weakness of this theory will be exposed, namely, its lack of epistemic evaluations for the individual performances of legal agents.

A. The Nature of Epistemic Justification in the Field of Law

How is justificatory status conferred in the field of law? To answer this question, some terminology must be understood. Theories of justification are accounts that specify the conditions under which a person is justified in believing (Goldman, “What is Justified Belief?” 334). Consequently, a theory of justification adopts the next structure:

S is justified in believing that *p* if and only if:

C_1

C_2

...

C_n

In this structure, *S* stands for a cognitive agent, *p* for a fact or proposition, and $C_1 \ldots C_n$ are the conditions for justificatory status.

As a first approximation, Goldman suggests that:

S is justified in believing that *p* if and only if:

C: *p* results from a reliable cognitive process.

Two concepts need to be clarified, specifically, “reliable” and “cognitive process.” Goldman defines cognitive process as a function with inputs that have beliefs as outputs (“What is Justified Belief?” 339). Two types of processes are important here. Firstly, the belief-dependent processes have other beliefs as inputs. Secondly, the belief-independent processes do not have other beliefs as inputs. Perception is an example of belief-independent processes. Reasoning, which includes antecedent beliefs within their premises is an instance of belief-dependent processes. Following this terminology, Goldman introduces more distinctions. There are two

kinds of beliefs. A belief-independent belief is the output of a belief-independent process. A belief-dependent belief is the result of a belief-dependent process. A final concept is necessary, "reliability consists of the tendency of a process to produce beliefs that are true rather than false" (What is Justified Belief?" 338). While in belief-dependent processes reliability depends on the truth of the inputs (i.e., it is conditional), in belief-independent processes, reliability is categorical. From these distinctions, reliabilism suggests two forms for evaluating justificatory status.

The first form is for the belief-independent processes:

S is justified in believing that *p* if and only if:

C_1: *p* is a belief-independent belief, and

C_2: *p* is the result of a categorically reliable process.

The second form is for the belief-dependent processes:

S is justified in believing that *p* if and only if:

C_1: *p* is a belief-dependent belief, and

C_2: *p* is the result of a conditional reliable process.

If my interpretation of Goldman's ideas is not wrong, legal knowledge is a type of belief-dependent process. This formula captures the core of my interpretation:

A legal agent is justified in holding an epistemic judgment (*j*), in a legal procedure (*lp*), if and only if:

C_1: *j* depends on the procedural interventions of other participants in a *lp*.

C_2: *j* is the result of the truth-conduciveness of *lp*.

I will explain the two conditions for legal knowledge below, but a previous distinction is required. Goldman states, "Notice that I am speaking of *judgments* rather than *beliefs* … The

reason for this deviation is that the palpable outputs of legal deliberations are not private beliefs but public judgments of guilt and innocence, liability or non liability" (*Knowledge in a Social World* 272).This is an important distinction between GE and LE. While the former studies epistemic justification independently of actual justifications of legal agents in dialectic scenarios, the latter is concerned with epistemic justifications publicly justified in legal contexts. Therefore, for Goldman, legal argumentation is a constitutive part of LE.

To continue, legal agents do not perceive the facts under litigation directly; rather, they form their judgments from different sources of legal knowledge. To mention the most common examples, the presumed fact that "Y was murdered by X" is not perceived by the detective who looks for relevant evidence that establishes whether X murdered Y. Neither the prosecutor who publically accuses X of murder, nor X's attorney perceived the fact under litigation. Instead, they build their respective versions of the case with information provided by their side's detectives, witnesses, material evidence, and the like. Finally, the trier of facts—judge or jury—does not perceive the alleged facts. On the contrary, he/she receives the information from the witnesses who are examined and counter-examined at trial. As a consequence, *j* depends on the procedural interventions of other participants in *lp*.

If *j* depends on the procedural interventions of other participants in *lp*, then *j* is not required to be categorically reliable, but conditionally reliable. In other words, the truth of *j* depends on the truth of its inputs. Three examples proposed by Goldman illustrate types of cues that juries find very probative ("Simple Heuristic and Legal Evidence"221). First, imagine a witness identification testimony where the witness points the finger at the defendant and states "this is the one." With this information, the trier of facts would probably decide that X murdered Y if the witness pointed at X. However, identifications are not 100% accurate. Witnesses also

make mistakes, and this failure is transferred to the fact-finders' decision. Second, when a person confesses that he/she did the crime under inquiry, a judge or a jury tend to believe that the person who confessed actually did the crime. Yet, some confessions are produced by police intimidation or by the possibility of a plea bargain that ends in a negotiation with less serious crime charges for the offender. If X confesses that he murdered Y when he did not do it, all legal judgments drawn from X's confession will not be true. Finally, when a technical clarification is needed to understand the alleged facts, the trier of facts will rely on expert testimonies. Since one of the most important criteria for accepting an expert assertion is the credibility that the expert witness has, some inaccurate expert testimonies are incorporated into legal judgments. Ultimately, the credibility an expert has is not an epistemic criterion (i.e., it is not related to the seeking the truth). To conclude, "we cannot expect any [inferential process in the field of law] to make correct (truthful) inferences if its inputs or premises are substantially inaccurate. 'Garbage in, garbage out', as the saying goes" ("Simple Heuristic and Legal Evidence" 219).

Due to the fact that *lp* is conditionally reliable, the accuracy of legal knowledge depends upon the truth-value of the interventions inputted in the judgment-forming process. Besides, because one of "the core missions of [the law] is to elevate community levels of truth possession, information possession, knowledge possession, or possession of justified rational [judgments]" ("A Guide to Social Epistemology" 19), the law has to take care of its inputs minimizing their inaccuracy. How can those sources of knowledge be controlled? Goldman suggests that inputs can be controlled with the appropriate design of legal systems. Since the law is an epistemic system (i.e., a social system that houses social practices, procedures, institutions and/or patterns of interpersonal influence that affect the epistemic outcome of its members), it can control the epistemic interactions of legal agents. Legal systems poorly designed will allow for the

introduction of inaccurate inputs, and will output wrong judgments. Therefore, *j* is the result of the truth-conduciveness of *lp*.

Even though the elements for legal epistemic evaluations have been established, I think the conditions for legal knowledge are not sufficient. I agree that judgment-cognitive processes in the field of law are conditionally reliable. However, the attaining of legal knowledge not only depends upon the appropriate design of legal institutions, but also the epistemic performance of legal agents is essential. Before developing my criticism, I will reconstruct a second part of Goldman's account that is quite important for the issue of this paper. Goldman thinks legal epistemic evaluations themselves are a domain of social epistemology. Now I will explore the arguments that justify this methodological option.

B. Social Legal Epistemology, Again

As it has been previously stated, Goldman claims that LE is a domain of social epistemology. His argument runs as follows:

P21. Epistemic practices are performed either individually or socially.

P22. If epistemic practices are performed individually, then they should be evaluated by individual epistemology.

P23. If epistemic practices are performed socially, then they should be evaluated by social epistemology.

Therefore,

P24. Epistemic practices should be evaluated either by social or individual epistemology, but it is not the case that epistemic practices should be evaluated by both social and individual epistemology.

P25. Legal epistemic practices are not performed individually.

Therefore,

P26. Legal epistemic practices should be evaluated by social epistemology, and not by individual epistemology.

(P21) is an inclusive disjunction. For this proposition to be true requires at least one of its disjuncts to be true. The first disjunct, 'epistemic practices are performed individually', is true, for individuals realize activities in seeking knowledge. Epistemic activities are performed socially as well; for instance, communities of scientists work together for the achievement of knowledge. Therefore, (P21) is true.

Arguing for the truth of (P22) and (P23) requires recalling the different methodological emphasis of, both, individual and social epistemology. While the first focuses on mental states of isolated agents, the second cares about truth-conducive institutions. Hence, each kind of epistemology seems to accurately understand a different object.

> The objects of epistemic evaluation are cognitive processes, structures and mechanisms. But this only touches individual epistemology […] Social epistemology is concerned with the truth-getting impact of different patterns and arrangements of social intercourse. (Goldman, *Epsitemology and Cognition* 5)

Therefore, (P22) and (P23) are true.

There are two approaches for the study of knowledge, "Epistemology, as I conceive it, divides into two parts: individual epistemology and social epistemology" (Goldman,

Epistemology and Cognition 1). When seeking knowledge is a solitary activity, individual epistemology is deployed. In contrast, if more than one person is required for epistemic practices, social epistemology should be implemented.

> Traditional epistemology, taking its cue from Descartes, focused exclusively on the individual cognitive agent, construed as a solitary inquirer into nature. Social epistemology, by contrast, asks how groups of communities of agents can best pool their evidence-gathering resources and profit from dialectical exchange and debate (Goldman and Talbott 99).

Therefore, (P24) is true.

The most important arguments for the truth of (P25) were presented in Chapter 1. To recall, legal knowledge is achieved by legal agents who have different and complementary cognitive tasks. In the adversarial system of adjudication, the parts under litigation look for the relevant evidence, and the trier of facts decides whether or not the alleged facts occurred. This inquiry is fed by eyewitnesses, experts, detectives, and so on. They have the role of providing the relevant information that triggered cognitive processes in the field of law. That is why Goldman commits himself with the claim that LE is entirely social.

> The law features highly codifies systems and procedures in which multiple players interact to produce certain judgments, namely, verdicts. Since one of the central aims of these procedures, I shall argue, is to produce true or accurate judgments, it is natural to evaluate existing procedures along the veritistic dimension. This is the appropriate task, at any rate, for social epistemology (*Knowledge in a Social World* 272).

This is to state (P26).

I belief propositions (P21) – (P23) are true. However, (P24) is false. Although (P25) is true, it could lead to some wrong practical consequences which, with the incorrectness of (P24), draw a wrong conclusion. As it was shown in Chapter 1, LE should study the cognitive achievements of both legal agents and legal institutions, and social epistemology does not take into account legal agents. Therefore, (P26) is unacceptable. My arguments will be presented below.

C. Individual Epistemology v. Social Epistemology: A False Dilemma

My thesis is that Goldman's conditions for legal knowledge are not sufficient. Additionally, the distinction between social and individual epistemology is supported by a false dilemma. I intuit that this second point leads to the first one. Therefore, I will attack the horns of this dilemma first.

The issue is: Why does this argument infer the exclusive disjunction (P24) from the inclusive disjunction (P21), plus (P22) and (P23)? In other words, if epistemic practices are performed individually and socially, why should one dichotomize when dealing with knowledge (i.e., either individual or social epistemology)? The problem resides in the method for choosing the object of epistemic evaluation. In the argument, the difference between individual- and social-cognitive practices is aggregative. Because the isolated cognitive agents are the focal point of individual epistemology, it does not study aggregations and interactions of cognitive agents. Conversely, because social epistemology focuses on the collective process of knowledge and on the truth-conduciveness of social institutions, individual cognitive agents are beyond its scope of

action. I think the number of cognitive agents is an irrelevant factor for epistemic evaluations. What really matters is the failure or the success in the achievement of knowledge.

It could be objected that my diagnosis is wrong because there are cases in which individual practices of knowledge are taken into account by Goldman's theory. My answer is that these practices only matter to social epistemology when they are components of the aggregative process. Therefore, the epistemic performance of individual cognitive agents is not evaluated by Goldman's LE. His words illustrate my point:

> The contrast between individual and social epistemology, plus the way I characterize individual epistemology, may make it sound as if mental operations fall outside the province of social epistemology. That is not so […] the way an agent reasons from the reports, testimony, and arguments of others belongs to the field of social epistemology. In a sense, then, individual and social epistemology are not sharply exclusive branches of epistemology. However, the bulk of the practices subsumed under social epistemology fall outside individual epistemology. (*Knowledge in a Social World* 4, note 1)

Even though Goldman remarks that the concepts of legal and social epistemology have a degree of ambiguity, he thinks "the bulk of the practices subsumed under social epistemology fall outside individual epistemology." Legal-cognitive practices are subsumed in social epistemology. Therefore, legal-cognitive practices fall outside individual epistemology. As a consequence, legal epistemic practices cannot be studied from the perspective of legal agents.

> This viewpoint is an 'internal' one, a viewpoint appropriate to a certain role-player in the system […] The question we are presently pursuing is 'external' to any given adjudication system. It looks at whole systems and compares them with

> rivals. When such an external stance is taken, we cannot appeal to an internal component of a system as a criterion. (283)

However, Goldman's external point of view does not suffice to evaluate the acquisition of knowledge in the field of law. Although Goldman assesses the impact of legal institutions in the epistemic performance of legal agents, he overlooks the impact that legal agents have in legal systems. As it was shown in Chapter 2, the point of view of each participant in legal procedures not only enriches the field of law, but also makes possible the achievement of its objectives (e.g., the fact-finder determination is impossible without the work of diligent advocates who collect and evaluate the information required). Goldman minimizes the importance of individual participants in legal procedures; for this reason, this view focuses on the aims of legal procedures and not on the epistemological practices of legal agents. There are two practical interpretations of (P25).

> $P25_1$. Since legal epistemological practices are not performed individually, actions of individual legal agents are irrelevant.
>
> $P25_2$. Although legal epistemological practices are not performed individually, the actions of individual legal agents are relevant.

It seems to me that Goldman adopts ($P25_1$) because he does not take into account the epistemic performance of legal agents. That is why he infers (P26). I disagree. My strategy to deny this conclusion is to dissolve the dilemma in which Goldman's argument is supported. Such a criticism is possible if I provide a concept of legal-cognitive agent which includes both individual and social epistemological practices, but that does not dichotomize between individual and social cognitive practices. To be sure, previously I suggested that the inference from (P21) – (P23) to (P24) is possible because of the aggregative difference between individual-cognitive

practices and social-cognitive practices. Besides, I pointed out that although (P25) is true, individual epistemological practices are important for LE, ($P25_2$). Therefore, a non-dichotomist the concept of cognitive agent which considers the individual and social epistemic practices is required. Providing this concept of LE will capture my attention in the last part of this paper.

V. COGNITIVE AGENDAS AND LEGAL EPISTEMOLOGY

In the previous chapter, I suggested that Goldman's conditions for legal knowledge are not sufficient. Even though, both, the social nature of legal knowledge is correctly recognized by the first condition, and legal institutions are correctly prioritized by the second condition, Goldman's LE cannot evaluate the impact of legal agents' performance in the general legal-epistemic enterprise. This failure is shown by Goldman's inaccurate answer for some of the main concerns of LE. Practically, answering (Q1) and (Q3), Goldman focuses on the reliability of the procedure through which the inputs of information, or legal evidence, are processed to produce legal judgments. If the information is true and the legal procedure is truth-conducive, then legal judgments are true. Goldman takes for granted that legal agents, given the appropriate design of legal procedures, always process information correctly. But this is not the case. Legal agents make mistakes when processing information. Additionally, they do not perform their cognitive tasks with the same degree of efficiency as their peers. Goldman lacks both a theory of error and a method for the evaluation of the performance of legal agents.

I infer this problem can be faced by a theory that includes the perspective of legal agents into the institutional analysis. Yet, this intuition has a risk. Participant-oriented evaluations could be circular because they intend to assess legal systems with a constitutive element of the systems under evaluation. Goldman states, "When such an [institutional] stance is taken, we cannot appeal to an internal component of a system as a criterion. We first need a criterion appropriate to the choice of a system, and a component already built into a system (or even several systems) is inappropriate" (*Knowledge in a Social World* 283).Goldman avoids this circularity with his goal-oriented approach. Legal systems are aimed to achieve epistemic objectives. Whether or not

they achieve their epistemic aims is a non-circular criterion of evaluation because it does not take into account any element of the legal system as a variable in the evaluation.

I suspect that it is possible to combine a participant-oriented approach with a goal-oriented one. In Chapter 1, I state legal agents are neither plain individual, nor pure institutions. They are embedded into institutional purposes. Therefore, institutions dictate to legal agents what cognitive tasks they should do and how they should do them. Their goal is to realize those programs of action in such a way that the system discharges them from their commitments. How is this possible? They have to function properly, in accordance with their cognitive agendas. This means that legal agents can also be evaluated with a non-circular and goal-oriented perspective. I will explore this possibility in some detail in this last chapter. I have a theoretic ally for this journey, namely, the Practical Logic of Cognitive Systems (PLCS).

To recall, PLCS defines "logic as the disciplined description of the behavior of real-life logical agents" (Gabbay and Woods, *The Reach of Abduction* 1) and an "agent" as a kind of "information-processor" (Gabbay and Woods, *Agenda Relevance* 185) with a cognitive agenda or "program of action", that he/she is constrained to close (Gabbay and Woods, *The Reach of Abduction* 11). Additionally, the aim of PLCS is to describe the real conditions under which a cognitive agent deals with his/her resources (time, information and computational capacity) to close his/her cognitive agendas (10). I will deploy this theory below.

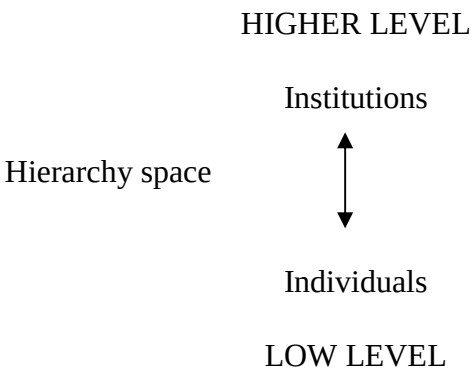
A. Legal-Cognitive Agency

I already show that legal agents are information processors. They process the information provided by other legal agents (inputs) and transform them in judgments (outputs). To illustrate,

detectives process the information provided by eyewitnesses to build a robust case for the prosecutor. The prosecutor, using the information provided by the detectives, presents publically his accusation to one tribunal. The jury listens to the witnesses, the prosecutor, and the defense at trial deciding if the alleged facts occurred. Now an extra qualification for legal agents is needed.

There are two factors that determine the different types of cognitive agents (Gabbay and Woods, *The Reach of Abduction.* 11). Firstly, the degree of command of resources (time, information and computational capability) an agent needs to advance or close his/her agendas. Secondly, the height of the cognitive bar that the agent has set for him/herself. With this in mind, this PLCS incorporates a hierarchical approach to agency. It postulates a hierarchy in which agents are placed in light of their interests and their capacities. Individuals are placed towards the bottom of the hierarchy and institutions higher up (see figure 3). While "humans perform their cognitive tasks on the basis of less information and less time than they might otherwise like to have", the institutional entities "can wait long enough to make a try for total information, and they can run the calculations that close their agendas both powerfully and precisely" (11-12).

Figure 3 Hierarchy of Cognitive Agents



Where should legal agents be placed? My view is that, in the terms of the hierarchy, they are neither pure individuals nor highly ranked institutional entities (i.e., theoretical agents). Consequently, they are institutional agents with epistemic limitations. This means they are placed higher than individuals, but in a lower level within the institutions that have epistemic goals. To be sure, a legal agent commands more cognitive resources than an individual. What is expected in the adversarial system of adjudication is that the litigants, with the incentive of wining the case, look for all the relevant information for the legal inquiry. Additionally, they work in teams of inquirers, witnesses, and experts who seek to make their versions of the case stronger. The idea is that these parallel inquiries exhaust all the relevant information to be known. Inquisitorial systems also have high expectations. In this case, the official in charge of finding relevant information is supported by institutional corps of investigation. Since the litigants do not handle evidence, the inquiry is not biased by their respective positions.

Another important difference between an individual and a legal agent is the cognitive aim they are disposed to achieve. Legal procedures have a high cognitive aim, namely, to determine the truth of the events under litigation. Legal agents serve this goal in different ways. This is true even for litigants who apparently only serve their respective side's interests. When they take part in a legal inquiry, their vantage point clarifies aspects of the events that are inaccessible by the officials. Individuals, on the contrary, are not always interested in the truth. This explains why individuals are naturally hasty generalizers, or why they do not always use truth-preserving strategies of reasoning (*The Reach of Abduction* 23-25).

Even though legal agents are ranked higher than individuals, they are not perfect inquirers such as scientific groups (e.g., NASA), as Haack wishes. Since legal inquiries have strong timeline constrictions, they make decisions with incomplete and partial information.

Furthermore, in matter of facts, legal systems expect legal agents to reason as individuals and not as experts. Experts take part in legal discussions as qualified witnesses, but they are not able to make the ultimate decision. The institution of the jury in adversarial systems illustrates this point. *Prima facie*, any citizen can be part of the jury, unless he/she has expert knowledge about the actual issues under consideration. Given this case, the jury is excluded. Alternatively, in legal systems in which the fact finder should be an educated citizen, what is expected is that such a qualified citizen be educated in the law, but not in factual matters such as forensic science. To sum up, legal agents have the computational capacity of an average person, or a reasonable person (Woods 226). Therefore, they are ranked lower within the institutions, but higher than individuals.

B. Legal-Cognitive Agendas

Even though legal systems set cognitive goals by themselves (e.g., the discovery of the truth), as Goldman states, they cannot autonomously attain these objectives. Instead, legal agents put the system into operation. I believe the main failure of Goldman's LE is to overcome this important role of legal agents. A couple of obvious examples illuminate my point. It is not the law of evidence (e.g., FRE) by itself that determines the truth of the events under litigation. On the contrary, the trier of facts, either a judge or a jury, is responsible for such an important decision. In the same way, the rules about the use of expert testimony (e.g., Daubert v. Merrell Dow Pharmaceuticals) do not select and present experts at trial, but the litigants are who introduce such a scientific discourse in order to strengthen their respective versions of the case. Consequently, legal systems depend upon legal agents. Using Laudan's metaphor, legal systems

are epistemic engines that are triggered and handled by legal agents. Let me explain this codependence in detail.

One can understand legal procedures as timelines whose endpoints are verdicts of guilt or innocence in criminal cases, and liability or non-liability in civil cases. Verdicts are produced when different conditions are satisfied. In western legal systems, the verdict comes after a trial. Similarly, the trial starts once the inquirer (i.e., the litigants in adversarial procedures and the judge in inquisitorial ones) analyzes the information available. Some of the verdict's necessary conditions are epistemic. For instance, in criminal procedures, a verdict of guilt is only possible when the prosecutor can justify the accusation beyond reasonable doubt. Besides, the evidence presented at trial should be relevant. Alternatively, some of the verdict's necessary conditions are not epistemic. For example, a verdict has to be proffered even if the judge does not have enough information. Equally, relevant information has to be excluded if it is obtained without following legal protocols of protection of civil rights.

Since the achievement of legal epistemic goals depends on legal agents' performance, legal systems regulate the activities to be realized by legal agents. In other words, legal systems impose cognitive agendas, or programs of action, on legal agents. The closure of those programs of action guarantees the seeking of the truth, which is the ultimate legal epistemic goal. The achievement of this desideratum is progressive and flexible. It is progressive for two reasons. First, procedural timelines are designed in such a way that the legal inquiry starts with some clues and indications that trigger the activities of detectives, and ends with the judicial determination of the facts under litigation. Second, it is also progressive because the accurate cognitive performance of a legal agent who intervenes in an initial procedural stage (e.g., pretrial stages) makes possible the interventions of other legal agents who intervene in posterior

procedural stages (e.g., trial or appeal). For instance, a prosecutor's defense of a public accusation presupposes a detective's identification of a suspect and the factual verification of the legal conditions for the existence of a crime. The achievement of legal epistemic goals is flexible because there is not a unique way to close legal epistemic agendas. On the contrary, several strategies can be adopted. To illustrate, the identification of a suspect is a target that can be reached in parallel ways such as the testimony of eyewitnesses, a victim's identification parade, a forensic analysis of DNA, or even a confession.

Paraphrasing Gabbay and Woods's ideas, a legal-cognitive agenda is a cognitive mapping from known legal hypothesis to proven legal states of affairs (*Agenda Relevance* 211). The knowledge of a legal state of affairs under consideration constitutes a cognitive-procedural constraint for the legal agent to whom the agenda has been set. He/she is only discharged from such a commitment when the legal hypothesis is known. For instance, the main procedural constrain for jurors in adversarial criminal procedures is to decide whether or not the prosecutor's accusation (e.g., X is guilty of murdering Y) is justified beyond reasonable doubt. Advancing this agenda, jurors have to interpret and assess the evidence presented at trial wondering whether or not X had a motive and the opportunity to murder Y (legal hypotheses to be known). This last task is only possible when the jurors listen to the witnesses' examination and cross-examination, and to the prosecutor's and defense's opening and closing statements (Woods 217).

My view is that legal epistemology not only should evaluate the truth-conduciveness of legal procedures, but also should verify that the cognitive agendas that legal systems impose on legal agents are closed properly. An appropriate design of legal systems both sets proper cognitive objectives to be achieved and provides adequate cognitive recourses to legal agents;

but this is not enough. Legal agents should close their cognitive agendas within the correct time and processing the required information in accordance with the legal necessities. This is why I suggest completing the conditions for legal knowledge as follows:

> A legal agent is justified in holding an epistemic judgment (*j*), in a legal procedure (*lp*), if and only if:
>
> C_1: *j* depends on the procedural interventions of other participants in *lp*.
>
> C_2: *j* is the result of the truth-conduciveness of *lp*.
>
> C_3: *j* is the appropriate closure of a legal-cognitive agenda.

C. Conclusion

Even though the theory I am endorsing is not complete, I have established the foundations for future explorations. The intuitive answers that this account provides for the legal epistemic problems mentioned in this paper indicate that this account isa fertile landfor future research.

(Q1) depends upon the concept of cognitive agenda. Evidence should be understood in relation to the agenda a determined agent intends to close or advance. Legal evidence constitutes the required information for legal agents to perform their cognitive tasks. General epistemic evidence is mostly understood as the information an individual needs to know for his/her normal epistemic activities.

(Q2) includes legal concepts that characterize the cognitive agendas to be closed in legal procedures. For example, the concept of reasonable doubt qualifies two agendas to be closed, namely, the prosecutor's and the jury's. While the prosecutor has to justify his accusation beyond

reasonable doubt, the jury has to verify whether or not the prosecutor's argumentation fulfills this standard. In addition, it is not expected that either the prosecutor or the jury compute information beyond the capability of a reasonable men.

Processes of reasoning such as Bayesian inference or coherent histories are subparts of legal-cognitive agendas, (Q3). In accordance with FRE (Rule 401) for a judge to determine whether a piece of evidence is relevant (legal states of affairs to be proved), Bayesian inference seems to be appropriate (legal state of affairs under consideration). Similarly, when litigants present their versions of the alleged facts, it is expected their witnesses' stories are coherent.

(Q4) can be answered by understanding that legal systems have epistemic agendas (e.g., seeking for the truth) and non-epistemic, or decisional, agendas (e.g., protecting civil rights) (Gabbay and Woods, *The Reach of Abduction* 257). On one hand, the object of the epistemic evaluations of the adversarial system is its cognitive agendas, as Goldman correctly claims. On the other hand, the fact that adversarial systems have non-epistemic agendas does not rule out the philosophical evaluation of its cognitive agendas, as Haack wrongly suggests.

Some of the exclusionary rules of evidence, (Q5), are an important part of law's seeking the truth. One necessary condition for this desideratum is the elution of error. With this in mind, "the court's agenda is to avoid wrong conviction" (Gabbay and Woods, *The Reach of Abduction* 255). This agenda is closed excluding irrelevant evidence, for example.

(Q6) – (Q10) are problems of design and evaluation of legal-cognitive agendas and subagendas, the most important suggestion of Goldman's LE. To illustrate, when a fact finder have inadequate resources for the cognitive task the system assigns to him, he/she will fail at identifying the relevant material facts (Q7).

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