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UNDERVALUING INDETERMINACY: TRANSLATING SOCIAL SCIENCE INTO LAW

*Elizabeth Mertz**

INTRODUCTION

Among the biggest challenges facing attempts to translate between social science and law is the problem of indeterminacy. Social scientists and legal scholars alike certainly accept the idea that both social science and law can be indeterminate. Indeed, as others in this Symposium note, a stark division between uncertainty and predictability tends to oversimplify the situation.¹ Both in law and in social science, it may be better to ask where and how demands for certainty arise—or to what degree and when indeterminacy is acceptable and even welcome. However, scholars from law and social science approach the issue with very different frameworks. This can lead to inaccurate or distorted interdisciplinary translations.

In this Article, I will focus on the question of how legal frameworks and approaches can distort social science—and, in particular, on how these frameworks can misinterpret the significance of perceived indeterminacy in social science findings. While lawyers and legal scholars may be willing to accept the idea that statutes and court decisions contain indeterminacy, they tend to be less comfortable with indeterminacy in social science. Rather than accepting that indeterminacy may be an inextricable part of good science, judges and lawyers sometimes confuse a lack of complete certainty with a lack of validity when attempting to make use of social scientific research. I will argue that there is a systematic lack of appreciation among lawyers and legal scholars for the scientific valence and value of indeterminacy in social science findings.

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1. See, e.g., Anita Bernstein, *Security, Freedom, Unpredictability, Predictability*, 60 DEPAUL L. REV. (2010); Stephen Daniels & Joanne Martin, *Plaintiffs' Lawyers: Dealing with the Possible but Not Certain*, 60 DEPAUL L. REV. (2010).

The field of anthropological linguistics provides a useful lens through which to analyze the problem of translation between different professions. In Part II, I outline this linguistic approach to studying interdisciplinary translation.² This part of the Article introduces a number of tools for analyzing communication that have been developed by linguistic anthropology in recent decades. Part III uses those tools to produce analyses of the somewhat different languages of law and social science.³ In Part IV, I consider the questions that arise when we attempt to translate across these divergent professional languages.⁴ Part V focuses on particular questions of certainty and uncertainty in this cross-disciplinary translation.⁵ The Article concludes with a recommendation: anyone who wishes to achieve a high-quality translation of social science into legal terms should pay close attention to the assumptions and orientations embedded in linguistic frameworks.

II. LINGUISTIC FRAMEWORKS

Anthropologists have for many years examined the issues involved in translating between different cultures and languages.⁶ In recent de-

2. See *infra* notes 6–11 and accompanying text.

3. See *infra* notes 12–26 and accompanying text.

4. See *infra* notes 27–33 and accompanying text.

5. See *infra* notes 34–42 and accompanying text.

6. At its inception, anthropology in the United States was characterized by a “four-field” approach that combined the subfields of cultural (also called “sociocultural”), physical, linguistic, and archeological anthropology. See FRANZ BOAS, A FRANZ BOAS READER: THE SHAPING OF AMERICAN ANTHROPOLOGY, 1883–1911, at 35 (George W. Stocking, Jr. ed., 1974) (describing anthropology as combining biological, linguistic, ethnological—i.e., cultural—and archaeological analysis). Cultural and linguistic anthropologists shared the task of translating across very different cultures and languages, often working in non-Western settings. As Alessandro Duranti, a leading linguistic anthropologist, explains,

Linguistic anthropology must be viewed as part of the wider field of anthropology . . . because it examines language through the lenses of anthropological concerns. These concerns include the transmission and reproduction of culture, the relationship between cultural systems and different forms of social organization, and the role of the material conditions of existence in a people’s understanding of the world.

ALESSANDRO DURANTI, LINGUISTIC ANTHROPOLOGY 4 (1997). This set of concerns means that linguistic anthropologists’ research draws on advances in understanding societies and cultures developed by its “cousin” within anthropology—sociocultural anthropology—as well as on technical approaches to analyzing languages that have emerged from other disciplines that study language. See ELIZABETH MERTZ, THE LANGUAGE OF LAW SCHOOL: LEARNING TO “THINK LIKE A LAWYER” 16–21 (2007) [hereinafter MERTZ, THE LANGUAGE OF LAW SCHOOL].

As a result, linguistic anthropology can provide a powerful set of tools for understanding the cultural and social dimensions of languages, and for analyzing what happens when we try to translate between different cultures (or subcultures—including subcultures such as those existing within different disciplines or professions):

Linguistic anthropologists start from the assumption that there are dimensions of speaking that can only be captured by studying what people actually *do* with language,

cares, the field has paid particular attention to the linguistic assumptions and frames that undergird communication of all kinds. Whenever we speak, we are making assumptions about how language works—for example, we may assume that raised voices indicate anger, that interrupting someone else in a certain setting is a sign of friendship (or not), that using a deferential form of speech is a marker of respect or social distance, and so forth. It turns out that our assumptions about language and how it operates provide a crucial structure for effective communication. Our assumptions about language itself operate on a “metalinguistic” level, one step removed from the details of what we actually say, but working at another linguistic level to structure and guide how we talk.

To take one broad example, consider the impact of how we frame any conversation with another person. If I think that we are having an argument, I may interpret the same words quite differently than I would if I think that we are having a friendly discussion. Think about how one might attempt to redirect a conversation gone wrong by attempting to provide a new frame: “I’m not disagreeing with you; I just want to understand what you are saying.” Such metalinguistic⁷ cor-

by matching words, silences, and gestures with the context in which those signs are produced. A consequence of this programmatic position has been the discovery of many ways in which speaking is a social act and as such is subject to the constraints of social action.

DURANTI, *supra*, at 9. Thus, a linguistic anthropological approach examines how language is actually used by members of different cultures and subcultures, looking at intricate aspects of language structure, but also at the social and cultural settings in which that structure is put into action. For other exegetical descriptions of linguistic anthropological concepts as they apply to law, see MERTZ, *THE LANGUAGE OF LAW SCHOOL*, *supra*, at 16–21, 26–30; see generally Elizabeth Mertz, *Legal Language: Pragmatics, Poetics, and Social Power*, 23 ANN. REV. ANTHROPOLOGY 435 (1994).

7. Technically, this is actually a “metapragmatic” correction. See Michael Silverstein, *Language Structure and Linguistic Ideology*, in *THE ELEMENTS: A PARASESSION ON LINGUISTIC UNITS AND LEVELS* 193, 208 (Paul R. Clyne, William F. Hanks & Carol L. Hofbauer eds., 1979); Michael Silverstein, *Metapragmatic Discourse and Metapragmatic Function*, in *REFLEXIVE LANGUAGE: REPORTED SPEECH AND METAPRAGMATICS* 33 (John A. Lucy ed., 1993); see also DURANTI, *supra* note 6, at 37–38.

The “pragmatic” level of language meaning relies on contexts of use; for example, the word “this” cannot be interpreted without some knowledge of surrounding context. For a more detailed explanation of the difference between “pragmatic,” “semantic,” and “syntactic/grammatical” levels of language, see Elizabeth Mertz, *An Afterword: Tapping the Promise of Relational Contract Theory—“Real” Legal Language and a New Legal Realism*, 94 NW. U. L. REV. 909, 920–22 (2000). “Metapragmatic” language, then, operates at a metalinguistic level to reflect on this social or contextual function of language. So if I say, “I’m only trying to say nice things to you,” I am using metalanguage to try to correct how you are understanding the contextual aspect of what I said (and thus, I am engaging in a “metapragmatic” correction). The study of metapragmatics has grown within anthropological linguistics in recent decades and has yielded some very important insights about communication and miscommunication in social settings. See DURANTI, *supra* note 6, at 37–38; see generally Elizabeth Mertz & Jonathan Yovel, *Metal-*

rections do not only affect a global interpretive frame for the interaction, they can also alter interpretations of individual word meaning, gestures, and facial expressions. (And conversely, our reading of small nonverbal cues can contribute to our overall metalinguistic framing assumptions.) These interpretations can shift from minute to minute in any conversation, although we frequently also receive some stabilizing signals from overall settings—particularly institutional settings. For example, when a professor walks up to the front of the classroom and begins to talk, an interpretive frame such as “this is instructive speech” or “this is a lecture” is generally set in motion, triggered by the speech situation—until or unless there is some other strong signal to the contrary. By contrast, were a friend to stand up on a table at a party and utter the same words that this professor spoke, they would likely not be interpreted in the same way because of the difference in metalinguistic framing given in part by the setting. Thus, the kind of language we use, the way it is structured, and the setting we are in all interact to produce very particular kinds of understandings (and, at times, misunderstandings).

Notice that these frameworks also rely on theories about language itself and how it functions. Anthropologists have denominated these theories “linguistic ideologies” because they are not neutral ideas, but are rather deeply implicated in the cultures and social structures in which they are situated.⁸ For example, if you think that different kinds of speech reflect people’s status and concomitant worth or intelligence, you may interpret speech that is typical of someone from a lower socioeconomic class as indicative of a lower mental ability or work ethic.⁹ This idea about language, or linguistic ideology, is

linguistic Awareness, in HANDBOOK OF PRAGMATICS: COGNITION & PRAGMATICS 1, 7–8 (Dominiek Sandra et al. eds., 2000); Elizabeth Mertz, *Semiotic Anthropology*, 36 ANN. REV. ANTHROPOLOGY 337 (2007).

8. For general overviews of this development, see generally Kathryn A. Woolard & Bambi B. Schieffelin, *Language Ideology*, 23 ANN. REV. ANTHROPOLOGY 55 (1994), and articles in LANGUAGE IDEOLOGIES: PRACTICE AND THEORY (Bambi B. Schieffelin, Kathryn A. Woolard & Paul V. Kroskrity eds., 1998).

9. Judith Irvine, for example, describes how metalinguistic conceptions of the relationship between low- and high-ranking members of a society are then enacted through daily use of different styles of language (known as “linguistic registers”) in Wolof society:

[T]he Wolof metapragmatic terminology firmly identifies the two registers, “noble speech” and “griot speech,” with the rank of speakers—nobles and griots being oppositely ranked castes. . . .

Both registers are used on some occasions by almost everyone. Still, their use always conveys a sense that the participants in a speech situation inhabit contrasting ranks, even if only metaphorically.

Judith T. Irvine, *Ideologies of Honorific Language*, in LANGUAGE IDEOLOGIES: PRACTICE AND THEORY, *supra* note 8, at 51, 57.

strongly shaped by the interplay of language and social hierarchy in a given society. It can obviously affect how an individual is perceived and heard in individual speech encounters and can in turn affect access to educational or other social resources that themselves then affect people's socioeconomic status.¹⁰ (This is not to say that there are not other factors influencing these outcomes as well; it is simply to map part of the contribution of language to these dynamics.)

To summarize, there is a great deal of research in anthropological linguistics pointing to the importance of metalinguistic frames and ideologies of language in everyday communication.¹¹ This research gives us new precision in analyzing how we communicate with each other, particularly when we are attempting to communicate across social, cultural, or institutional divisions, such as those between different disciplines and professions.

III. THE METALINGUISTICS OF LAW AND SOCIAL SCIENCE

Let us now consider how overarching frameworks shaping the languages of law and of social science deal with conceptions of indeterminacy.¹² One of the primary functions of law in U.S. society, as in many other societies, is to guide the resolution of conflicts—to reach decisions or outcomes when a matter is in dispute. Often, given the costs of going to court, these matters are of fairly large consequence to the parties involved.¹³ The language of law, then, may be indeterminate

10. MERTZ, *THE LANGUAGE OF LAW SCHOOL*, *supra* note 6, at 24–25.

11. In my experience, it is not uncommon for those outside of linguistics to experience frustration when they initially encounter concepts from this field. For the reader who finds the linguistic terminology—especially in my footnotes—annoyingly technical, I have two consoling comments. First, I assure you that I have simplified this considerably. Second, anyone outside of legal academia who picks up an article on the more arcane aspects of any legal field would likely have a similar reaction. Thus, one important metalinguistic step for all of us might be to develop some patience—or perhaps just a thick skin—in trying to wade through explanations from other fields. The payoff, we all hope, is that in learning from hard-working thinkers in other fields, we can enrich our understandings in ways that will translate into better use of social science and better-informed legal initiatives. (For those who wish that I myself had been more adept at performing the translation process that I am describing, I am happy to accept with humility the idea that I am as much an ongoing learner as an expert in this new endeavor—and to invite us as a community to work together in developing new and better approaches.)

12. Of necessity, this discussion is at a schematic and abstract level, although it is also grounded in specific discourses and institutions. I am, in a sense, employing a method made famous many years ago by the famous sociologist Max Weber. Weber advocated the use of “ideal types” in analyzing social phenomena; these abstract categories allowed analysts to compare across specific contexts while still remaining close to empirically observed reality. *See* MAX WEBER, *THE METHODOLOGY OF THE SOCIAL SCIENCES* 90–91 (Edward A. Shils & Henry A. Finch eds. & trans., 1949).

13. Stewart Macaulay has for many years been trying to call attention to the insight, long noted and documented, within the law-and-society tradition, that “[l]aw is not free.” Stewart

in many ways, but ultimately it is used to reach decisions. In the United States, the paradigmatic model for resolving these disputes is an adversarial one in which two sides are pitted against one another, with each side ideally making the strongest possible case for its position. (In actuality, of course, the party with the most resources is frequently the one able to launch the strongest case, regardless of the merits in the abstract.)¹⁴

This core model is clearly in evidence in the first year of law school, when students are inducted into the new mode of “thinking (and talking) like lawyers.” A study I conducted of first-year law school classes demonstrated that adversarial dialogue is insistently modeled in this formative pedagogical moment, regardless of the kind of school or professorial teaching method.¹⁵ A similar finding emerged from an investigation conducted by the Carnegie Foundation.¹⁶ The authors of the widely-cited Carnegie Report identify a “signature pedagogy”¹⁷ in legal education centered on an oppositional “case-dialogue”¹⁸ method: “[L]egal argument is often triggered by conflicts—events that confuse or contradict a community’s expectations. Legal proceedings, especially litigation, therefore, have an inescapable narrative dimen-

Macaulay, *Law and the Behavioral Sciences: Is There Any There There?*, 6 *LAW & POL’Y* 149, 152 (1984); see also Stewart Macaulay, *The New Versus the Old Legal Realism: “Things Ain’t What They Used to Be,”* 2005 *WIS. L. REV.* 365, 383 (gently pointing out that although more than twenty years had passed since the earlier publication—and others by similarly minded scholars—the idea that using law has costs still seems to be news in some forms of legal scholarship).

14. For a famous article on this issue in the law-and-society tradition, see generally Marc Galanter, *Why the “Haves” Come out Ahead: Speculations on the Limits of Legal Change*, 9 *LAW & SOC’Y REV.* 95 (1974). Inequalities in the delivery of legal services have been well-established within sociological and anthropological studies of law, and yet legal professionals thinking about doctrinal reform still at times reason as if all players have an even playing field. See Stewart Macaulay, *Contracts, New Legal Realism, and Improving the Navigation of The Yellow Submarine*, 80 *TUL. L. REV.* 1161, 1167, 1172, 1191–92 (2006).

15. See MERTZ, *THE LANGUAGE OF LAW SCHOOL*, *supra* note 6, at 124–28, 130–32. This study found that professors used a variety of “surface structures” in their teaching—ranging from question–answer dialogues that approximated prototypical Socratic dialogues to a class in which the professor occupied much of the time in a monologic lecture style. *Id.* Yet even the professor prone to monologue framed his own lectures in terms of question–answer dialogue. One professor included the following in his lecture:

Now, when you asked me if that is a subjective standard or not, the answer has to be, “No, absolutely not,” because reasonable is always objective. . . . I think, what you were probably driving at is, is the more basic question, “Is this an individualistic determination on a case-by-case basis?” Absolutely, absolutely.

Id. at 166. A central argument in the book is that the deep structure of law school teaching often reinforces a core focus on argumentative dialogue as the source of wisdom and legal legitimacy. *Id.* at 4–5.

16. See WILLIAM M. SULLIVAN ET AL., *EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW* 47–48 (2007).

17. *Id.* at 75.

18. *Id.* at 48.

sion, with story and counter-story being constructed by the contending parties to the dispute.”¹⁹ This results in a conflictual structure that focuses students’ attention on abstract argumentation rather than on the practical realities and ethical dilemmas they will confront as practicing lawyers.²⁰

The point of linguistic exchanges in this system is to make a decision, and “maybe” or “let’s think about it more” will not achieve this result. As students are taught to inhabit the linguistic landscape²¹ of legal reasoning, they learn to hone in on carefully delimited points of decision: was there a two-sided agreement in which both parties agreed to the same terms? What sorts of things should we look at to make this decision? What sorts of agreement “count”? Evidence in this system is introduced for the purpose of making a decision one way or the other. Indeterminacy as to law and facts may be unavoidable, but the goal of legal work is to resolve that indeterminacy, using versions of what happened (and understandings of how these versions fit within a legal framework) that seem most plausible to the decision maker.²²

By contrast, the ideal in social science is to produce the most accurate possible account or explanation of social phenomena. One important step in this process is to carefully chart out the limits of any particular study because otherwise the researcher may wind up claim-

19. *Id.* at 75.

20. *See id.* at 186–88.

21. *See id.*

22. There are a number of ways of analyzing how this occurs. For example, psychologists have examined how jurors draw on information gleaned from testimony and non-testimonial behavior to construct the stories these jurors use to make decisions. *See, e.g.,* Shari Seidman Diamond et al., *Juror Questions During Trial: A Window into Juror Thinking*, 59 *VAND. L. REV.* 1927, 1956–57 (2006) (explaining that when permitted to ask questions, jurors attempt to “cross-check” information); Mary R. Rose & Shari Seidman Diamond, *Offstage Behavior: Real Jurors’ Scrutiny of Non-Testimonial Conduct*, 58 *DEPAUL L. REV.* 311, 340 (2009) (asserting that “off-stage” behavior has little effect on group jury decision making). Earlier work on psychology and language suggested that jurors use a “story model” to reach decisions. *See* W. LANCE BENNETT & MARTHA S. FELDMAN, *RECONSTRUCTING REALITY IN THE COURTROOM: JUSTICE AND JUDGMENT IN AMERICAN CULTURE* 3 (1981); Nancy Pennington & Reid Hastie, *Explaining the Evidence: Tests of the Story Model for Juror Decision Making*, 62 *J. PERSONALITY & SOC. PSYCHOL.* 189, 205–06 (1992). More recent work has affirmed and further analyzed the use of stories or narratives in jury deliberations. *See generally* Robin H. Conley & John M. Conley, *Stories from the Jury Room: How Jurors Use Narrative to Process Evidence*, in *STUDIES IN LAW, POLITICS & SOCIETY* 25 (Austin Sarat ed., 2009).

From different angles, scholars have used data on the actual operation of trials to conclude that the system works well in producing certain results from uncertain information. *See generally* ROBERT P. BURNS, *A THEORY OF THE TRIAL* (2001); NEIL VIDMAR & VALERIE P. HANS, *AMERICAN JURIES: THE VERDICT* (2007). On the role of linguistics in structuring how evidence is presented, *see* J. MAXWELL ATKINSON & PAUL DREW, *ORDER IN COURT: THE ORGANISATION OF VERBAL INTERACTION IN JUDICIAL SETTINGS* 6–8 (1979).

ing too much from her results. All social science methods are necessarily partial; each provides only a particular angle on what is happening. Thus, indeterminacy becomes not a barrier to success, but part of the success: the successful social scientist demarcates what she cannot explain as well as what she can explain. In this sense, social scientists have a freedom to pursue accuracy at the expense of quick certainty, a freedom that lawyers lack. The point of communicating findings, whether in an article or at a professional meeting, is to push forward the state of knowledge in a field rather than to reach a definitive result. While researchers may attach normative recommendations to their results, reaching normative judgments is not a core part of the metalinguistic framework behind most social science research.²³

Because social scientists can take time to stand back and come to more precise conclusions, they can also approach evidence differently. In the best cases, they permit what they find “on the ground” to guide their conclusions; they do not ignore important facts that might upset their preconceptions. Lawyers, on the other hand, are trained to be advocates. It is their job to discredit facts that might undermine their clients’ cases. Judges, legislators, and sometimes law professors, we hope, can stand back a bit further. But they often come to the material steeped in a legal framework that poses alternatives in unsubtle terms—yes or no, guilty or not guilty. Their training and circumstances do not permit the luxury of standing back to survey the scene for very long: people are waiting for their decisions, often in urgent circumstances. Neither the legal professionals nor the people they serve are particularly interested in a long-winded, heavily hedged, or deeply nuanced explanation of what is happening. They must make choices and come to decisions. From this perspective, the careful language and lengthy conclusions of social science studies can appear to be an extravagance—indeed, an abandonment of social responsibility. As Lee Epstein and Gary King succinctly explain, “An attorney who treats a client like a hypothesis would be disbarred; a Ph.D. who advocates a hypothesis like a client would be ignored.”²⁴

23. At least since the time of Thomas Kuhn, scholars studying science itself as a process have noted that scientific evolution is not entirely divorced from social and normative frameworks. See THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 1–4 (2d ed. 1962); see generally BRUNO LATOUR & STEVE WOOLGAR, *LABORATORY LIFE: THE SOCIAL CONSTRUCTION OF SCIENTIFIC FACTS* (1979). However, even given this inevitable connection with the people and institutions from which they come, scientific and social scientific methodologies offer some checks on the predispositions of researchers performing studies. For a classic statement along these lines, see MAX WEBER, *FROM MAX WEBER: ESSAYS IN SOCIOLOGY* 143–46 (H. H. Gerth & C. Wright Mills eds. & trans., 1946).

24. Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1, 9 (2002).

An action-oriented framework is in many ways the backbone of legal reasoning—it is, after all, the whole point of the legal system. On the other hand, it can also create confusion about some crucial issues and nuances that might be important to legal decision making. An urgency about getting to the “bottom line,” while it is a daily necessity in law, can sometimes lead to the evolution of overly simplistic “rules of thumb” that go unchecked or unquestioned. Social science and science undergo a regular process of peer review before being published in professional journals; during this process (when it works correctly), any overgeneralizations or mistakes can be corrected.

Imagine, for example, that studies of some mammals showed that animals who were aggressive during conflicts survived better than those who were passive. These perfectly sound scientific studies might lead to a generalization: “Aggressive behavior leads to better survival outcomes.” Now imagine an attempt to apply this finding in a legal setting; imagine that someone tries to leap directly from science to law without considering translation issues. In a legal setting, one would typically want to use science to generate a rule to guide human behavior, such as, “It works better to be aggressive when in an argument.” Numerous difficulties with this approach become apparent. Ideally, peer review of a leap of this kind between “some mammals” and humans would reveal the problems of generalizing so simplistically between normative fields (survival in biological versus legal/social/moral terms), among kinds of mammals (humans versus others, minimally), and across very different settings (all jokes about courtrooms as jungles aside). To understand the situation for humans, peer reviewers would want all of these translation issues to be squarely confronted; they would expect any generalization about human conduct to be founded in careful research on human behaviors in different contexts; and they would require scholars writing on the topic to pay close attention to research that had already been done in the area. The goal would not necessarily be to generate any guideline for behavior; instead it would be to create an ongoing, increasingly nuanced discussion of how different sorts of behavior play out in different contexts for different kinds of mammals. The only parallel check on such errors in law would involve use of the adversarial process and would often involve rival expert witnesses, a long and laborious process that does not always reach accurate results. Peer review is not commonly performed by law reviews, and individual attorneys are not required

to undergo training that would help them catch these kinds of errors on their own.²⁵

In areas such as family law, where complex social and psychological realities meet the blunt edge of legal procedure, the legal system has taken increasing note of the shortcomings of its own core approach to social problems. For several decades, legal professionals have become ever-more concerned about the unfortunate results for families and children of unquestioning commitment to full-blown adversarial procedures.²⁶ However, as these legal professionals then turn to experts in other fields such as psychology and social work (as well as to the relevant empirical research), they move into new worlds—worlds for which a standard legal education leaves them poorly equipped. Conversely, researchers in social science are frequently blissfully unaware of the realities of the legal universe into which their findings may be dropped. As a consequence, people on both sides of this ongoing conversation may proceed unaware that they are assuming a level of interdisciplinary transparency that does not exist. They may, in fact, be trying to have two very different conversations. At best, they leave these exchanges with a smug sense of superiority, reflecting on how stupid or silly the other disciplinary perspective was. At least in this case they are aware that there is some kind of disciplinary difference. At worst, they leave thinking that they have understood one another perfectly, when in fact they selectively heard bits and pieces that they found useful, fitting them into their own disciplinary frameworks. In these cases, a failure to carefully reflect on the translation process itself yields misleading results, paired with a misguided sense of overconfidence in the scientific validity of those results.

IV. TRANSLATING BETWEEN DISCIPLINARY FRAMEWORKS

In a recent essay, anthropological linguist Michael Silverstein proposes a new framework for understanding translation—one that is quite useful in analyzing attempts at interdisciplinary conversation. He argues that we are in fact not dealing with true “translation” when we move between law and social science, in the sense of simply picking up one word and translating into an exact equivalent in another

25. See Elizabeth Mertz, *Translating Science into Family Law: An Overview*, 56 DEPAUL L. REV. 802–03 (2007) (noting an example of law review authors’ generalization from studies of mice to humans in the context of the legal system). Appellate courts’ consideration of rival amicus briefs suffers from many of the same defects: adversarial structure in which monied interests may have an advantage, judges who are not trained social scientists, etc.

26. ELEANOR E. MACCOBY & ROBERT H. MNOOKIN, *DIVIDING THE CHILD: SOCIAL & LEGAL DILEMMAS OF CUSTODY* 7–10 (1992).

language.²⁷ Using an approach developed from empirical research on languages, Silverstein demonstrates that it is unusual to find a straightforward equivalence between expressions in two different languages. This kind of perfect equivalence is limited to relatively universal aspects of linguistic systems, anchored in grammatical structuring. One example would be the use of a “first-person” form to indicate the speaker of an utterance (“I,” for example). Once we locate that form in two languages, we can with some confidence claim to be performing a relatively “pure” translation when we substitute one for the other. (Even with these very straightforward categories, there are some interesting variations among languages in the importance of distinctions such as those between “I,” “me,” and “mine”—that is, differences in grammatical “case.”) But there are certain very limited kinds of speech that lend themselves to being translated in the most transparent sense.²⁸ It is therefore arguably possible to translate “I” into another language and be sure that you mean the same thing in both languages.

However, if we move beyond these straightforward and limited examples, we move into different, far more complicated territory. At this point, Silverstein would argue that we are engaged in a different task when we try to move between languages. He uses the issue of expletives or swearing to make his point.²⁹ For example, he points to one of the most profane utterances possible in the Tonkawa language: “May you give birth to a wandering ghost.”³⁰ If we just transparently “translate” these words into English, we capture very little of the intended meaning for an English speaker in the United States today. Conversely, if we were to directly translate a common profanity from English for a speaker of Tonkawa, she might find the resulting utterance somewhat puzzling (as, for example, if one translated “fuck you” as “you have sex”). Even within the realm of English-language speakers, a speaker of U.S. English who was unacquainted with British norms might wonder why British English-speakers get upset when the word “bloody” is used; under a literal “translation,” he might translate “it was a bloody mess” as a description of an injury.

27. See Michael Silverstein, *Translation, Transduction, Transformation: Skating “Glossando” on Thin Semiotic Ice*, in *TRANSLATING CULTURES: PERSPECTIVES ON TRANSLATION AND ANTHROPOLOGY* 75, 75–76 (Paula G. Rubel & Abraham Rosman eds., 2003).

28. These are often located at an intersection of language structure and function (“speaker” as in the person from whom, as indicated grammatically, this utterance functionally comes) and social-contextual roles (“speaker” as the person in this social setting who is the author of the utterance).

29. *Id.* at 86–88.

30. *Id.*

Taking the argument one step further, imagine now that you want to translate a play or a story from Tonkawa into English. At one point a character in the story swears at another. You might decide to render “may you give birth to a wandering ghost” as “fuck you.” Clearly, something other than transparent translation has occurred here. Silverstein calls this more complicated procedure “transduction”:

We should think seriously of the underlying metaphor of the energy transducer that I invoke, such as a hydroelectric generator. Here, one form of organized energy [e.g. . . . downward . . . rush of water against turbine blades] is asymmetrically converted into another kind of energy at an energetic transduction site . . . harnessing at least some of it across energetic frameworks. In this transducer, the two modes of mechanical energy are converted in a functionally regular way into another kind of energy altogether . . . of course with some slippage between the two systems of energy organization, due to “friction,” “inefficiencies,” “random contingent factors,” and other tragedies of the laws of thermodynamics and of uncertainty.³¹

To take an example familiar to students of many European languages, consider the way pronouns are used to address other people (generally, the “second person”—in English, “you”). French speakers, for example, distinguish between the second-person singular (“tu”) and the second-person plural (“vous”). However, French speakers also use the second-person plural when speaking to just one person; in this case, use of the plural pronoun indicates respect or formality. So I might say “vous” to several people to indicate plural listeners—or I might say “vous” to my boss, who is just one person, to indicate deference. How then would we transduce the meaning of a shift to “vous” for a modern-day English speaker? If we retain the same word (“you”), we capture an important part of the literal meaning, but we fail to convey another part of the communication. To accomplish this in English, we may have to shift other aspects of the language—perhaps changing from an informal to a formal tone in the sentence as a whole—to “transduce” a core part of the meaning here.

There is still one more step to consider. In some cases—indeed perhaps in most cases—we may have to make an even more dramatic shift in moving between two languages; in fact, we may have to make a “transformation.” Silverstein states, “Sometimes there is no way sufficiently to systematize and limit the transduction of verbal material across functionally intersecting [linguistic] systems. Even trying to play it as safe as we can with the textual stuff with which, by hypothesis, we start, semiotic transformation then occurs.”³² Silverstein urges

31. Silverstein, *supra* note 27, at 83–84 (brackets in original).

32. *Id.* at 92.

that we pay attention to the fact that some kind of transformation might be entailed in almost every attempt to translate, although to different degrees. Certainly, when we are translating between different cultural contexts as well as different languages, he notes, we can no longer speak of “translation” in the most transparent sense, because we have to shift so much of the literal meaning to achieve anything resembling equivalence in the overall meaning. In fact, the search for equivalence may in and of itself distort; when we try too hard to create an equivalence, we may hide the fact that there are things that we simply cannot translate. Thus, the appearance of equivalence in our translation results in an even more imprecise sense of the differences between the two systems for our listeners or readers.

James Boyd White, a pioneering scholar in the field of law and literature, makes a similar point when he writes “that all languages are limited . . . that full translation from one to the other is always in a deep sense impossible.”³³ In this case, then, scholars from science and the humanities wind up at the same conclusion—because in the language of science, to ignore inexactitudes in translation is to miss the boat in terms of scientific accuracy as well as in terms of interpretive adequacy. Imagine that a scientific finding (“eating grass has beneficial health consequences”) has been presented with caveats, so that the researchers tell you that their findings apply only to laboratory rats and not humans and that much more testing will be required before applicability to humans can be ascertained. Now suppose that someone were then to attempt to “translate” this finding without the caveat, saying that there is recent scientific research showing potential benefits of eating grass and that we might all want to go out and try this. Most of us would have no difficulty locating the translation problem here. But smaller, more subtle versions of this scenario are occurring frequently when lawyers, judges, and law professors turn to social science for answers.

In sum, any accurate or adequate attempt to move from social science to law (or vice versa) requires systematic attention to the translation process itself. Analysis from diverse disciplinary points of view teaches us that this translation process is far from transparent. The important task ahead of us, then, is to develop better understandings of legal and social scientific “transduction”—or translation in the more complex sense. (I will not use the more complex terminology here, on the theory that it might impede the “translation” that I am

33. JAMES BOYD WHITE, *JUSTICE AS TRANSLATION: AN ESSAY IN CULTURAL AND LEGAL CRITICISM* 81 (1990).

attempting.) Only from that foundation can we calculate the trade-offs involved in one approach as opposed to another. Given the current content of legal education, there is reason to be concerned that the average law student, lawyer, or social scientist has had little opportunity to consider these trade-offs.

One of the more subtle translation issues as we move between legal and social scientific frameworks is the choice of how to approach the indeterminacy valued by social scientists (as a guard against overclaiming from limited study results) from the vantage of the law (which cannot tell a litigant to wait five years until we clarify the state of knowledge with more studies).

V. A CASE OF MISTAKEN INDETERMINACY (AND A DEMAND FOR TOO MUCH DETERMINACY)

The need for determinacy in legal decision making—along with an adversarial framework—may lead legal professionals to overinterpret the indeterminacy they find in social science studies. One famous (or infamous) example of this can be found in a Supreme Court decision concerning the death penalty.

The Supreme Court's decisions in cases like *McCleskey v. Kemp* and *Lockhart v. McCree* are often cited to illustrate the gap between how the scientific and legal communities approach evidence from social science.³⁴ *Lockhart*, for example, raised the question of whether the pre-screening of jurors to be sure that they would impose the death penalty might result in juries that were more likely to convict a defendant of a crime in the first phase of the trial.³⁵ The Court was presented with a number of social science studies; from varying methodological angles, they all came to the same conclusion: when jurors who might have difficulty imposing the death penalty are excluded from a jury, the resulting juries are actually more likely to convict the defendant.³⁶ When confronted by this pile of studies, Justice Rehnquist used a method far more appropriate for law than for science: he examined each one for any potential flaws and then disqualified all but one.³⁷ Left with this one study, he concluded that this by itself

34. See, e.g., David C. Baldus, *Keynote Address: The Death Penalty Dialogue Between Law and Social Science*, 70 IND. L.J. 1033, 1038 (1995); Michael L. Radelet & Marian J. Borg, *The Changing Nature of Death Penalty Debates*, 26 ANN. REV. SOC. 43, 48–49 (2000); Jonathan Simon, *Thinking About Criminal Justice: Sociolegal Expertise and the Modernization of American Criminal Justice*, in THE BLACKWELL COMPANION TO LAW AND SOCIETY 320 (Austin Sarat ed., 2004); see also *McCleskey v. Kemp*, 481 U.S. 279 (1987).

35. See *Lockhart v. McCree*, 476 U.S. 162 (1986).

36. *Id.* at 169–73.

37. *Id.* at 168–74.

was inadequate to document a bias toward conviction on the part of “death qualified” juries.³⁸ In other words, he approached the pile of studies in much the way an attorney would approach a stack of evidence that contradicted her position, looking for reasons to throw out anything with imperfections. However, as we have already noted, good science is imperfect, and the best science makes careful note of its own imperfections or uncertainties. Yet this very feature, which balanced out the uncertainties endemic to good science, was described as a source of fatal uncertainty by a leading U.S. jurist. A pile of studies that reach similar conclusions despite differences in methods and research design is about the closest thing to a certain result one can reach in science. It is always possible to find, within a scientific society, some expressions of doubt and uncertainty; those expressions of doubt are themselves in need of expert translation rather than naïve appropriation by professionals from other fields.

Of course, it may be that Justice Rehnquist was in fact like an attorney who has already chosen a side and was simply sifting the evidence in a way designed to reach a preordained conclusion. This is a point made by well-known psychologist of law Phoebe Ellsworth, in her classic essay on this difficult translation issue.³⁹ In that article, she reviewed the Supreme Court’s use of social science in death penalty cases, making a good case for the proposition that the Court was rejecting sound social science on largely ideological grounds.⁴⁰ Even granting Ellsworth’s point about the Court’s likely motivation, it is still worth noting that in setting out its reasoning, the Court was forced to deal with the social science evidence. And the resulting written opinion demonstrates a fundamental misunderstanding of the norms for assessing social science accepted within the scientific community. It is also worth remarking that the Court perceived no need to question its underlying orientation in dealing with social science, refusing to even consider or discuss this crucial translation issue. And indeed, this fundamental issue is not part of any standard law school curriculum or of legal discourse generally. Yet, as Ellsworth ably demonstrates, the norms for judging studies in social science differ in important ways from standard legal interpretive approaches.⁴¹ If courts are to be arbiters of social science findings, a very minimal re-

38. *Id.* at 173–74.

39. See Phoebe C. Ellsworth, *Unpleasant Facts: The Supreme Court’s Response to Empirical Research on Capital Punishment*, in *CHALLENGING CAPITAL PUNISHMENT: LEGAL AND SOCIAL SCIENCE APPROACHES* 177 (Kenneth C. Haas & James A. Inciardi eds., 1988).

40. *See id.* at 205–07.

41. *See id.*

quirement would seem to be that they become better-informed about the norms surrounding indeterminacy in social science—norms that differ in important ways from their own.⁴²

VI. CONCLUSION

The lack of systematic consideration of this question of translation is in some sense astonishing given how much attention has been paid to the issue of courts' role in interpreting science and social science.⁴³ A simple but important lesson from linguistic anthropology is to begin with an accurate assessment of differing norms within the communities being translated into law. In this case, a crucial norm to consider is the different value of indeterminacy.

42. Here is a place where the field of anthropology might have something to offer: it is arguably the social science field that has placed the problem of this kind of translation at the core of its disciplinary practice. Since its inception, sociocultural anthropology has been at work developing methods for putting aside one's own cultural assumptions (spoken of as "ethnocentrism") in order to gain a more accurate understanding of the norms and assumptions of other cultures.

43. This is evident in cases like *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993), *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), and others, as well as in voluminous commentary on these issues. I have elsewhere written about the differing demands for specificity and precision in social science and law:

Law reviews require a high degree of precision in the citation to authority. . . . On the other hand, they usually cannot and do not check the validity of the texts being cited themselves. . . . By contrast, peer-reviewed journals rely on authors to be accurate about page numbers. . . . It is quite possible to put the wrong page number into a footnote for a peer-reviewed journal and get away with it. On the other hand, if one cites a faulty study, ideally the peer reviewers will notice this. If the article author has relied in some crucial way on a study known to be unreliable, he or she will not be able to keep the citation; indeed, either a "revise and resubmit" or a rejection will likely result.

Elizabeth Mertz, *Inside the Law School Classroom: Toward a New Legal Realist Pedagogy*, 60 VAND. L. REV. 483, 496 (2007).