The Empirical Foundation of Normative Arguments in Legal Reasoning

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Abstract

Empirical legal studies thrive in the U.S. but not so much elsewhere. Yet even in the U.S., the way in which empirical work is useful for normative legal arguments remains unclear. This article first points out the junction between empirical facts and normative arguments. Both teleological and consequentialist arguments, in one of the premises, require “difference-making facts,” which point out causal relations. Many empirical researches make causal inferences and thus constitute an essential part in teleological and consequentialist arguments, which are typical normative arguments in legal reasoning. Then this article offers a descriptive theory of legal reasoning. Some empirical research does not make causal inference, but they still fall within the domain of legal scholarship, because describing valid laws is a core function of doctrinal studies of law, and sometimes only sophisticated empirical research can aptly describe laws.

Keywords

Difference-making facts, teleological arguments, consequentialist arguments, causal inference, institutional behavior, efficacy of law, doctrinal studies of law

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I. INTRODUCTION

The relation between empirical facts and normative arguments in legal research is a century-old issue. In the American jurisprudence, it is called the divide between “is” and “ought.” In the German jurisprudence, it is “Sein” versus “Sollen.” The mainstream view appears to be that the relation is a difficult one; that is, one cannot jump from an empirical finding to a normative conclusion. This gap has led to different developments in the U.S. and in civil law countries. In the U.S., empirical legal studies1 thrive anyway. Some critics, however, point out that empirical legal studies have a life of their own and often ignore the normative implication. In Germany and many civil-law countries, empirical legal scholars may find themselves outsiders of the legal communities, as their work is not considered relevant for legal scholarship (Rechtswissenschaft), which is usually regarded as a normative enterprise. We think these two developments are unfortunate, and this article offers a framework to unite the empirical and normative dimensions in legal scholarship.

Fischman (2013) makes a seminal contribution to reunite the “is” and “ought” in empirical legal scholarship. Fischman (2013: 154) argues that 1) empiricists should first prioritize normative questions and be explicit about the values that motivate their research; 2) empiricists should allow substantive questions to drive their choice of methods; and 3) empiricists need to be more explicit about how they are combining objective findings with contestable assumptions in order to reach normative conclusions. Fischman (2013: 157–58) goes further and elaborates what he means by prioritizing normative goals and setting standards for important empirical works. Specifically, empirical research is important if it could guide legal reform, describe important legal phenomena, and contribute to the development of theories.

We agree with almost everything Fischman says, but we wish to dig even deeper. In the American context, we contend that the connection between

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1 For expanded definition of empirical studies and empirical methods, see, for instance, Lawless, Robbennolt, and Ulen (2009: 7–14); Epstein and Martin (2010: 905–08); Cane and Kritzer (2010). While empirical methods contain both quantitative and qualitative approaches, this article mainly defends quantitative empirical methods, even though many of our arguments can apply to the qualitative approach as well.
empirical and normative dimensions of legal reasoning can be made more explicit. In the civil-law context, Fischman’s argument may not resonate with doctrinal scholars who still cannot find a place for empirical work in their shrine of the doctrinal study of law. In this article, we offer a theory that can both create the theoretical junction in the U.S. and weave empirical legal studies into civil-law legal theory. Dagan, Kreitner, and Kricheli-Katz (2016) point out that “integrating empirical insight into legal discourse requires translation.” Our framework provides such bridging mechanism. Rubin (1997: 46) pessimistically points out that “[w]e have no methodology to move directly from the discourses we perceive as descriptive...to decisions about the way to organize our society and the kinds of laws we should establish to effect that organization. Nor does it seem likely that we will be able to develop one” (emphasis added). This article strikes a positive note and advances a theory to bridge “is” and “ought.”

In short, we argue that normative arguments in legal reasoning often have to rely on sophisticated empirical facts, the products of empirical legal studies. Teleological arguments and consequentialist arguments are embodied in much of legal reasoning. One of the two premises in these two types of arguments is a normative prior, whereas the other premise represents a causal relation. Many empirical legal studies attempt to make causal inferences, and such empirical findings can serve as premises in these types of normative arguments. Empirical legal studies, therefore, can be normatively important.

Moreover, although not all empirical studies make causal inferences, we claim that those that do not may still fall within the domain of “the doctrinal study of law” (Rechtsdogmatik), the German-style of narrowly-defined legal scholarship. The doctrinal study of law contains an empirical dimension, as knowing and describing valid law often requires knowledge beyond law in the books. Empirical legal studies can aid in this respect, and thus should be counted as legal scholarship.

2 Dagan (2013: 20) also argue that “[l]egal analysis needs both empirical data and normative judgments.”
3 Rubin (1988: 1847), among others, points out that “the most distinctive feature of standard legal scholarship is its prescriptive voice.”
The rest of the article is structured as follows: Part II elaborates the role of empirical findings in normative arguments. Part III discusses the empirical dimension of “the doctrinal study of law,” and explains why empirical legal studies are less received outside the U.S. Part V concludes.

II. THE ROLE OF EMPIRICAL FACTS IN NORMATIVE ARGUMENTS

First of all, let’s get the terminology straight. We call a fact that can be used to justify a normative claim a “normative reason.” Although David Hume (2000 [1739-40]: 302) and others famously contend that there is an unbridgeable gap between “is” and “ought,” we all constantly use empirical facts to justify our normative claims about what ought to or should be done. We tell others to quit smoking because smoking damages one’s health. We send our children to bed early, adding that being an early bird brings all kinds of health advantages. These health-related facts are empirical, but they are also normative reasons: they explain why you ought to quit smoking or why the children should go to bed early.

In philosophical literature, a normative reason is often defined as a fact that counts in favor of an action (see, e.g., Scanlon 1998: 17; Parfit 2011: 31). However, it is not clear what “counting in favor of” means. Even if it is understood as a justificatory relation between a fact and an action that ought to be done, it is still not clear what kind of facts can be regarded as reasons to justify a normative claim. Our main idea is that a normative reason is a difference-making fact, which points out that an action or a legal measure makes a difference as to whether or not a certain outcome occurs. This outcome can be a valuable or desirable state of affairs, or the fulfillment of someone’s desires. For example, the fact that smoking damages health is a reason to quit, and this fact is a difference-making one in that smoking makes a difference as to whether or not health will be damaged. To give another example, the fact that sleeping early will lead to an increase in children’s height is also a difference-making one, because it shows that sleeping early makes a difference as to the increase of children’s height. This

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fact is a reason to send our children to bed early.

A difference-making fact can be conceived as a causal fact in the sense that causes make a difference to what happens—in other words, causes are difference-makers for their effects. If we adopt a probabilistic theory of causation, the presence or absence of the cause $X$ makes a difference to the probability of the effect $Y$. If the presence of $X$ increases the probability that an event $Y$ will happen, we can state that $X$ causes $Y$ (or, as long as $Y$ is concerned, $X$ is a difference-maker). As we will demonstrate below, the notion of normative reasons as difference-making facts is the critical junction of empirical studies and normative arguments.

By pointing out what differences an act makes, a difference-making fact provides a quasi-teleological explanation of what ought to be done and thus can be used to justify a normative claim. For example, an explanation of why one ought to quit smoking is that smoking causes damage to one’s health; in order to avoid this undesirable consequence, one ought not to smoke. In the same way, the claim that children should go to bed early is justified by the fact that doing so will lead to an increase in height. For the sake of height increase, they should go to bed early.

A normative claim justified or explained in this way depends on a given goal as well as on a causal fact. If one does not aim to be healthy, or if increase in height is not a desirable consequence for children, the difference-making facts that play the role of normative reasons in the previous examples will not be deployed to justify the normative conclusions. Granted, choosing a goal is a normative decision. Yet having a goal itself does not tell us what to do and how to achieve the goal. One who desires to be fit needs to know what the effective ways to lose weights are. One who aims to be healthy also has to know whether quitting smoking can prevent his health from being damaged. These effective ways imply factual relations between causes and effects (i.e. difference-making facts)—such as “if you jog for one hour per day, you would lose 5 pounds in a month or so.” That is, one needs to have a firm grasp of difference-making facts to

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5 For various difference-making-based accounts of causality, see Illari and Russo (2014).
ascertain whether performing or refraining from a certain action can achieve her goal. Once the normative goal is settled, the justification for the normative conclusion—that is, whether a certain action ought to be done in order to achieve the goal—is contingent upon the relevant difference-making facts.

To be sure, one cannot derive an ought-conclusion solely from an is-premise. Nevertheless, without an empirical premise that performing a certain action will achieve a given goal or value, it is also a logical fallacy to jump from the goal or value to a normative claim that this action ought to be done. Since difference-making facts point out the consequences of actions for which they are reasons, they can be used by an agent to deliberate on whether to perform an action in order to bring about (or avoid) certain consequences or to achieve a certain goal. Without the help of difference-making facts, one cannot provide a complete explanation of why the agent ought to perform (or refrain from) this action.

This part elaborates on our point that empirical legal researches that study causal relations are integral parts of teleological and consequentialist arguments. Section A uses proportionality analysis, a prevalent form of normative reasoning worldwide, as an example of the critical role of empirical facts—in particular difference-making facts—in legal reasoning. Section B formally explains the form of teleological and consequentialist arguments and how difference-making facts are embedded. Section C discusses causal inferences made by empirical legal studies. Institutional behaviors and efficacy of law are common subjects in empirical legal analysis. Section D explains how these studies contribute to teleological and consequentialist reasoning and their normative significance.

A. Using Empirical Facts in Proportionality Analysis

To exemplify the critical role of empirical facts in normative legal reasoning, let’s consider proportionality analysis. Proportionality analysis in constitutional and administrative review is prevalent in the civil-law European and East Asian countries and commonwealth countries (Sweet and Mathews 2008; Chengyi Huang and Law 2015). Even in the U.S., proportionality analysis has been
inherent in U.S. Supreme Court jurisprudence since the nineteenth century (Mathews and Sweet 2011). The last three of the four phases of proportionality analysis (Sweet and Mathews 2008: 76) draw on empirical facts. The “suitability” test examines whether the legal means are rationally related to the policy goals. The means-end relationship is obviously empirical in nature. Difference-making facts are required here; otherwise the legal means are not suitable for pursuing the goal. The “necessity” test requires the legal means to be “least restrictive.” Comparing whether a means is more or less restrictive than another requires empirical evidence. The last test, “balancing in the strict sense,” compares the costs of the infringement of rights and the benefits of the legal act. While normative reasoning is involved in, say, assigning normative weight to the infringed rights, weighing costs and benefits is again fact-laden. Proportionality analysis is essentially “cost-effective analysis” in economics and policy studies (Zerbe and Bellas 2006). Put in this light, it should not be surprising that proportionality analysis has to rely on empirical facts.

In the practice of proportionality analysis world-wide, empirical legal researches are not often cited, if at all. The indispensable role of empirical facts in proportionality analysis is often established by implicit common sense, intuition, or unempirical social scientific theories. While often this is enough, it does not mean that empirical legal research should not be welcomed. Findings of empirical legal studies provide a more solid foundation for normative reasoning.

B. Teleological and Consequentialist Arguments

Difference-making facts are mostly employed in teleological and consequentialist arguments. By pointing out the difference an act makes, a difference-making fact provides a teleological or consequentialist explanation of why this act ought to be or not to be done, thereby constituting a normative reason to or not to do this very act. Teleological and consequentialist arguments are often used in legal reasoning. Therefore, the relationship between empirical legal studies and normative legal reasoning is as follows: empirical legal research makes causal inferences (more on this below) which identify difference-making facts that are critical in teleological and consequentialist arguments. Below we
explain the role of difference-making facts in teleological and consequentialist arguments more formally.

1. **Teleological Argument: Form and Examples**

Teleological arguments as syllogisms take the following form:

(1) Goal E shall be achieved

(2) Means M helps achieve goal E (or, if M is not adopted, it is less likely, if at all, to achieve E)

Therefore, M shall be adopted.

The major premise, a value or a desirable goal, is normative. Ascertaining Goal E is sometimes an empirical endeavor. For instance, if E is the original intent of the framers, it could be verified through archival work or other historical investigations. Yet E is often a matter of value judgment and is the subject of debate in normative legal scholarship. There is very little that empirical legal research can do to contribute. Fischman (2013)’s admonition is that empirical researchers should keep E in mind.

Once E is established, or at least clearly formulated, a normative argument depends on whether the minor premise (2) stands. The minor premise is empirical; indeed, it represents a difference-making fact, and thus the subject of empirical legal research. For instance, E is “awarding punitive damages in like cases alike”; the empirical question in the minor premise is whether using juries to determine punitive damages achieves this goal. Empirical studies, if finding a negative answer, may underpin reform proposals to put a cap on punitive damages, or to use bench trials to assess the amount of pain and suffering damages.

It is worth emphasizing that difference-making facts can be probabilistic. Most, if not all, empirical legal research establishes probabilistic, rather than

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6 For empirical studies of this issue, see, for instance, Eisenberg et al. (1997); Eisenberg et al. (2006); Eisenberg and Wells (2006).
all-or-nothing, results. More specifically, M may not always lead to E, but the existence of M may increase the likelihood of E by, say, 70%. Empirical legal research can estimate the probability, but the uncertainty in the causal relations would affect the strength of the conclusion in the syllogism. If an empirical work finds that the probability is 90%, there could be a case to make a strong argument for M. If 30%, the case for M is far weaker. Of course, adopting M or not always depend on other factors, such as whether more effective alternatives exist, the relative costs of M and the alternative, etc. This judgment is not necessarily empirical, and this issue is beyond the scope of the article.

Teleological arguments, in the aforementioned or expanded form, are used very frequently in legal reasoning. Take constitutional review as an example: in the due process and equal protection jurisprudence of the U.S. Supreme Court, there are three standards of review: strict scrutiny, intermediate scrutiny, and rational review. Under all standards, state interests have to be compelling, important, and legitimate, respectively. Once the state interests have passed constitutional muster, they become the normative prior, the major premise of the teleological argument. Courts then have to examine the means-end relationship and the relationship has to be narrowly tailored, substantial, and rational, respectively (Choper 2008: 291, 293, 313). Whether the means-end relationship can sustain constitutional review often depends on a difference-making fact that is ascertainable, yet often presumed, only through sophisticated empirical research.

To be more concrete, let’s look at a few cases where a difference-making fact is involved in constitutional review. In Williamson v. Lee Optical Co., 348 U.S. 483 (1955), the U.S. Supreme Court declared constitutional an Oklahoma law that prohibits any person not a licensed optometrist or ophthalmologist to fit lenses to a face or to duplicate or replace into frames lenses, except upon written prescription by an Oklahoma licensed ophthalmologist or optometrist. The Court justifies the regulation by the reasonable intuition that requiring prescriptions would encourage more frequent eye examinations, enabling early detection of

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7 It is worth noting here that the strict scrutiny is very close to the proportionality analysis discussed in Part II.A.
more serious eye illness. Adopting a regulation that promotes better detection of eye illness is a difference-making fact, which could be more firmly established by quantitative studies.

In *Grutter v. Bollinger*, 539 U.S. 306 (2003), a landmark case in which the United States Supreme Court upheld the affirmative action admissions policy of the University of Michigan Law School, the Court relies on the inference that students with diverse backgrounds enhance classroom discussions and the educational experience, as well as promote cross-racial understanding. This is a difference-making fact that can be empirically tested. Indeed, Ho and Kelman (2014) use a natural experiment at Stanford Law School to test a similar pedagogical question that asks whether class sizes reduce the gender gap.

In *Young v. American Mini Theatres, Inc.*, 427 U.S. 50 (1976), the U.S. Supreme Court upheld the Detroit statute that limited the number of adult bookstores or adult theaters within 1000 feet. The Court reasoned that a concentration of adult theaters causes the area to become a focus of crime. This “secondary effect” justifies the city ordinance. Again, the court took wholesale this difference-making fact claimed by the Detroit government, while the effect of adult bookstores and theaters can be empirically verified (though not necessarily in Detroit).

2. *Consequentialist Argument: Form and Examples*

The form of consequentialist arguments is as follows:

(1) Means M leads to Result C

(2) Result C is desirable (or, C is undesirable)

Therefore, M shall be adopted (or, M shall not be adopted).

Teleological and consequentialist arguments share the similar structure, the only difference being the flipped major and minor premises. The major premise

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8 A forthcoming issue in NYU Law Review encompasses a symposium titled “Testing the Constitution.” The papers published there further demonstrate the critical junction of empirical research and constitutional reasoning.
here is a difference-making fact (M leads to C), whereas the minor premise is the normative evaluation. The key point is that both forms of arguments require difference-making facts.

Differences exist between these two types of arguments. Unlike teleological arguments, the consequence here (C) is not necessarily the realization of some value; rather, C could be a side effect of a legal measure. Moreover, when employing teleological arguments, the advocate usually has a specific goal in mind and assumes a certain relation between means and ends. Empirical legal research is oftentimes an ex post examination of the presumed minor premise. The purpose of this kind of empirical work would be clear. Again, this is what Fischman (2013) proposes. By contrast, in consequentialist arguments, the empirical studies may go first. That is, once a causal inference is conducted, a researcher would evaluate the result and then makes a case for or against the means. As a result, the normative significance in this type of research might be more ambiguous. Nonetheless, one should not jump to the conclusion that this type of research is useless for normative reasoning. Sometimes, the normative significance is not apparent because the normative goal is still in dispute or unexplored. Empirical scholarship cannot contribute to this. Sometimes, this kind of empirical research marks the beginning of normative debates.

Consequentialist arguments are also often used in legal reasoning. Using again constitutional review as an example: pragmatic judges (see, e.g., Posner 1996) and scholars would consider multiple values for constitutional review. Bobbitt (1991: 18–19)’s seminal six modalities of constitutional arguments include “prudential argument,” which is “actuated by facts.” Facts that reveal consequences of constitutional interpretations are thus often taken into account.

Two famous cases rendered by the U.S. Supreme Court, among others, utilize consequentialist arguments. In Brown v. Board of Education of Topeka, Kansas, 347 U.S. 483 (1954), Chief Justice Warren, when delivering the unanimous opinion of the court, cited social science and psychology researches to demonstrate that the detrimental effect of segregation is unlikely to be undone. The sense of inferiority felt by African American children affects their motivation to learn and leads to other problems with mental development. In Lawrence v.
Texas, 539 U.S. 558 (2003), the majority opinion delivered by Justice Kennedy states that criminalizing homosexual conducts subjects gay persons to discrimination and imposes a stigma on them. Such detrimental effects are apparently undesirable. These consequentialist arguments form an important part of the court’s persuasive force and normative stance.

3. *When Are Teleological and Consequential Arguments Not Used?*

Teleological arguments and consequential arguments incorporate difference-making facts, making empirical legal studies normatively relevant (more on this below). Our case for the normative relevance of empirical work, however, would meet a setback if legal reasoning often takes other types of argument forms. We divide the legal reasoning into two prototypes: legislative and judicial reasoning.

Legislative reasoning is often used by the legislature. Legislature is not bound by the text of its own prior promulgation and the constitutional text is often not taken literally. As a result, legislature can make policies rather freely, and legislators in floor debates often implicitly or explicitly draw on teleological or consequential arguments.

In judicial reasoning, a further distinction can be drawn between easy cases and hard cases. In hard cases, or when constitutional courts handle cases, consequential and teleological arguments are often the bread and butter. Easy cases appear to be different, while at the meta level it may not be. In easy cases, courts can solve disputes according to the plain meaning of a statute or a judge-made doctrine. In other words, textual interpretation, without reliance on different-making facts, suffices. A deeper question is why easy cases CAN be solved just by reference to the text or by prioritizing text. This is not self-evident. The priority of textual interpretation is a value-laden meta-teleological argument. That is, the major premise is something like “the point of rule of law is treating like cases alike”, “legal certainty, predictability, or deference to the intent of the democratic legislator are desirable ends.” The minor premise, again, is a seldom-verified empirical claim—a different-making fact—that textual interpretation can indeed and has already helped achieved the aforementioned goals; in other words, adopting the textual interpretation will

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9 Compare Edwards (1992) who distinguishes easy, hard, and very hard cases, and contends that easy cases should be solved by the applicable legal authorities while (very) hard cases seeks the aid of theories—and, we may add, empirical evidence.
make a difference to the achievement of legal certainty, predictability, democracy...etc. Hence, even though textual interpretation does not itself contain a difference-making fact, the choice of this interpretive approach is the product of a (meta-)teleological argument, one that can benefit from more solid empirical studies to confirm the intuition of many.

It is worth noting that which difference-making facts are relevant in legal reasoning depend upon the goals or values stated in the major (minor) premise of the teleological (consequentialist) arguments. In both types of arguments, normative conclusions are derived from normative premises together with empirical premises. For instance, from the major premise that the government should reduce the number of murders, and the minor premise that death penalty deters murders, one may derive a normative conclusion that the government should execute people on the death roll and maintain capital punishment. What kind of empirical premises—i.e., normatively relevant difference-making facts—are needed and can be used in such arguments depends partly on the normative position adopted as the major premise. If the major premise states another goal that should be achieved—say, retribution—the empirical minor premise has to be changed accordingly. Nonetheless, whether the normative position expressed in the major premise holds cannot be fully established by the difference-making facts.11

C. Empirical Legal Studies Make Causal Inference

We have now hopefully established that difference-making facts, which embody causal relations, are critical in normative legal reasoning. The next question is whether empirical legal studies can say anything about causal relations. As is well known, correlations are not causations (Jackson et al. 2003: 539–41). Without observing the counterfactuals, there is no way to establish causal relations. This is the fundamental problem of causal inference (Epstein and Martin 2014: 6).

While whether and what type of empirical examination can identify causal inference is still heavily debated within statistical science (Epstein and Martin 2014: 193–195), we take the position that carefully designed empirical research

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10 Donohue and Wolfers (2006), among others, challenge the deterrence effect of death penalty.
11 The literature on the morality of the death penalty is vast. For two different positions, see for example Hsu (2013) and Steiker (2005).
enhances our understanding of the relationship between means and ends (or, X on Y), and is thus relevant to normative legal arguments (Epstein and Martin 2014: 14). More specifically, we do not take the extreme position that no social science research can ever claim causal inference; otherwise, one can never make any grounded teleological or consequentialist arguments, as any intuition regarding the effect of X on Y would be faulted as well. Surely many estimates by empiricists would later be rejected or revised, but this does not make empirical research irrelevant to normative arguments. There are flawed pure normative works, but they do not render all normative works useless. Empirical research that uses the higher standard in identifying causal relations, such as randomized controlled experiments, regression discontinuity approach, instrumental variable approach, to name a few, could be given more weight in evaluating the strength of normative legal arguments that draw on empirical results derived from these types of legal research. But let us emphasize once again that other types of carefully executed empirical research is useful and relevant to normative legal reasoning too.

Moreover, we are not entirely pessimistic about identifying causes and effects in law. Correlation with causal asymmetry enables researchers to make a legitimate causal claim. That is, if X could cause Y but Y cannot possibly cause X, a strong correlation can only imply that X is a difference-maker in terms of Y. For instance, if strong correlations exist between judges’ gender and the amount of punitive damages, researchers can claim that gender affects the amount of damages, not the other way around, as judges’ gender cannot be changed by the damages awards. In addition, temporal priority (a cause X must precede its effect Y in time) gives researchers more confidence in claiming (not in the Humean sense, though) causation. Of course, confounding factors, endogeneity problems, and other empiricists’ nightmares always lurk in the background. This is a reminder that only carefully executed empirical work can serve as a basis for

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12 There is a vast literature on this issue. For the literature with an emphasis on empirical legal studies, see, for instance, Epstein and King (2002); Epstein and Martin (2014); Lawless, Robbennolt, and Ulen (2009); Gelbach and Klick (2015 forthcoming); Greiner (2008); Willborn and Paetzold (2009); Ho (2015). For the literature in statistics and social science, see, for example, Bollen and Pearl (2013); Brennan (1987); Freese and Kevern (2013); Smith (2013); Illari and Russo (2014).
strong normative legal arguments.

D. Institutional Behaviors and Efficacy of Law

Some empirical research is explicitly framed as investigating difference-making facts. Others are less so. Another line of empirical research, studying institutional behaviors and efficacy of law, however, also finds out facts that are normatively significant. This section demonstrates this relation.

Institutional behaviors refer to the law-related behaviors of judges, juries, prosecutors, legislators, government officials, etc. Many empirical studies are devoted to examining the effect of attorneys in litigation (see, e.g., Abrams and Yoon 2007; Kuo-Chang Huang 2008; Chang, Chen, and Lin 2015) and the behavioral pattern of judges and juries (see, e.g., Guthrie, Rachlinski, and Wistrich 2000; Hans 2000; Sunstein et al. 2002; Rachlinski, Guthrie, and Wistrich 2006; Guthrie, Rachlinski, and Wistrich 2007; Rachlinski, Guthrie, and Wistrich 2007; Rachlinski et al. 2009; Diamond et al. 2011; Eisenberg and Huang 2012; Epstein, Landes, and Posner 2013; Chang et al. 2014; Chang et al. 2015; Eisenberg and Heise 2015). Indeed, the study of judicial behavior is becoming a field of its own. Researchers identify whether and to what extent demographic characteristics of judges, juries, or litigation parties; cognitive biases; and case facts influence the verdicts.

Efficacy of law includes a broad swath of research. Checking the divide between law in books and law in action (Pound 1910) is the classic approach. Criminal law scholars examine the effect of various law enforcement measures such as increasing the number of police (see, e.g., Miles 2008; Lin 2009; Ho 2012; Ho, Donohue, and Leahy 2014). Other scholars study whether statutes, case laws, administrative rules, internal by-laws, and so on, change people’s behaviors (see, e.g., Bubb 2013).

Studies on institutional behaviors and efficacy of law are normatively relevant because teleological and consequentialist arguments are implicitly or explicitly embedded. Take, for example, the judicial and jury behavior studies: rule of law dictates that like cases should be treated alike (Rawls 1999: 208–10;
Posner 2011: 336–39). If judges or juries suffer from cognitive biases such as the anchoring effect (Teichman, Feldman, and Schurr 2014; Teichman and Zamir 2014; Chang, Chen, and Lin 2016), or they rule differently due to their own or the parties’ race or gender, the equality principle becomes a hollow hope. Some empirical studies stop at reporting their findings of the rationality or irrationality of judicial or jury behaviors, while others spell out the normative significance of their quantitative work. The causal relations found by both types of works, however, can serve as a premise in consequentialist or teleological arguments, whereas the rule of law is the other premise.

Given that the normative prior is fulfillment of the rule of law—or, more concretely, for example, race should not be a determinant in whether the defendant will face the death penalty (Donohue 2013)—empirical studies that examine whether or not race is a factor serves as the difference-making facts in the major premise of the consequentialist argument. The minor premise, naturally following from the normative prior, is that race discrimination in courts is bad. The conclusion is that the state of the world in which race is a factor in sentencing is normatively undesirable. The empiricists can (and sometimes do) go one step further, proposing reforms that can effectively reduce the effect of race—a follow-up teleological argument thus emerges:

(1) reducing the effect of race in sentencing is normatively desirable
(2) reform proposal M reduces the effect of race in sentencing

Therefore, M should be implemented

In other words, studies on institutional behaviors are often the major premise in consequentialist arguments, if not also paired with other normatively significant facts in teleological arguments. Thus, such empirical studies are normatively important.

Studies on the efficacy of law embody teleological and consequentialist arguments. For instance, legislatures either explicitly announce their policy goals in the statutes or implicitly disclose their intentions in floor debates, hearings, or other legislative materials. Statutes contain clauses regarding civil or criminal fines, regulatory or criminal penalty, to name a few, to achieve the goals. The
notice and registration mechanism in sex offender law is a prime example (Prescott and Rockoff 2011). Empirical work that examines whether Means M (the legal measures adopted by statutes) contributes to the fulfillment of E implies a teleological argument as long as the goal has a clear normative value. No matter if M is effective or not, these difference-making facts can be used as the minor premise in teleological arguments.

Oftentimes, empirical studies on the efficacy of law embody both teleological and consequentialist arguments at the same time. Such studies may find that Means M does contribute to the fulfillment of a desirable Goal E, at the expense of the side effect C. A teleological argument focusing on M and E concludes that M should be adopted, whereas a consequentialist argument focusing on M and C concludes that M should be reconsidered. The trade-off between E and C is ultimately a normative decision. That said, solid empirical studies are able to pinpoint the probabilities that M will lead to E and C and to identify the scope and magnitude of E and C, and thus aiding policy-makers in making more informed decisions. Also, a theoretical debate on the trade-off between E and C may become moot if empirical studies uncover that E or C does not exist in practice.

III. A DESCRIPTIVE THEORY OF LEGAL REASONING

American legal philosophers are interested in exploring “what is law?” (Dworkin 1986; Shapiro 2011), but few, if any, spend their career defining precisely what legal scholarship13 is or what legal studies are. Indeed, with the flourishing “law and” scholarship in American legal academia, the only feasible, encompassing definition of legal studies seems to be “any studies in which law is the subject matter,” and the “law” in this definition is likely to be more wide-ranging than the definition of law in the question of what law is (but compare Dagan, Kreitner, and Kricheli-Katz 2016).

In Germany and many other countries influenced by German jurisprudence, legal scholarship is Rechtsdogmatik, translated as “legal doctrine” (Peczenik 2005: 1–2), “legal dogmatics” (Aarnio, Alexy, and Peczenik 1981), or “the doctrinal

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study of law” (Ross 1959: 10–11; Aarnio 2011: 19–24). For legal scholars under this paradigm, the task of the doctrinal study of law (the translation we prefer) has "generally been defined as (i) the investigation of the content of the legal order, and (ii) the systematization of legal concepts and norms. These tasks are interrelated, too: the content of legal order is not independent of the method of systematization, and vice versa” (Aarnio, Alexy, and Peczenik 1981: 423). Put differently, the doctrinal study of law interprets and systematizes valid law (Aarnio 1997: 75; Peczenik 2005: 1).

These definitions, however, fail to highlight the contributions of empirical analysis, and thus are insufficient for our purpose. German legal philosopher Robert Alexy, by contrast, categorizes the doctrinal study of law into three distinct yet inter-related dimensions: empirical, analytical, and normative. These dimensions correspond to describing valid law, analyzing legal concepts and systems, and making proposals for the interpretation of legal rules or for legal reforms, respectively (Alexy 1989: 251–52). Alexy does not systematically articulate the empirical dimension of the doctrinal study of law, though he does point out that this dimension includes describing valid law and using empirical facts in legal arguments. We discuss the latter in this previous part. This part focuses on the former. Section A elaborates what kind of empirical works exhibit the empirical dimension of the doctrinal study of law. Section B discusses why the empirical dimension has been largely ignored so far in civil-law countries.

A. *Empirically Describe Law*

Describing valid laws has been part of what jurists have done for a long time. This is particularly evident in the U.S. Compiling restatement of law, writing a casebook or a *Kommentar* (Commentary), and similar endeavors all count as describing valid laws. Although it is conventionally understood that one of the main tasks of the doctrinal study of law is to describe valid laws, this type of work does not exhaust the traits of the descriptive task.

Rather than viewing laws solely as a system of norms, we consider legal systems also as systems of procedures that consist of enacting, applying, interpreting, and enforcing norms. A descriptive theory of legal reasoning, which is also an important task in describing valid laws, delineates what reasons the participants of the procedures (legislators and judges, to name a few) employ in enacting, applying, or interpreting legal norms and what factors influence their
in institutional behaviors, but it does not necessarily evaluate the merits of those reasons or factors. The usefulness of descriptive legal reasoning should not be under-estimated. As Eisenberg (2000: 667) aptly puts, “by providing an accurate portrayal of how the legal system operates, empirical legal analysis can influence not only individual cases, but also larger policy questions. Much room for progress exists because misperceptions about the legal systems are common.” Under this definition of the descriptive theory of legal reasoning, studies on institutional behaviors can be part of it, particularly those who do not aim to examine certain difference-making facts. For instance, research on whether judges and juries suffer from the anchoring effect further our understanding how irrelevant factors can affect case outcomes via judges’ and jurors’ heuristics.

Our point is that there are empirical studies that do not fall squarely within the domain of conventional institutional behavior studies, and yet they are an essential part in the descriptive theory of legal reasoning. Put differently, we argue that quantitative empirical studies are often necessary to describe valid laws. Restatements or casebooks are not close substitutes for these works. Hence, certain empirical legal works serve a double role in doctrinal studies.

More concretely, a casebook or a restatement project usually surveys selected cases rendered by the highest court of a jurisdiction, and summarizes legal ruling and its evolution. The reporters of law rely on the words of, say, judges to construct a coherent picture of law, but sometimes this is incomplete. This might be particularly true in equity cases, which are adjudicated on a case-by-case basis, and thus inherently more difficult to understand and describe systematically. One of us has empirically investigated an essentially equity power in the civil law—how district courts in Taiwan used their power awarded by Article 796-1 of the Taiwan Civil Code to preserve buildings that encroach over land boundary (Chang 2014b). The Taiwan Civil Code requires that judges take into account both the public and private interests of the two parties before deciding to remove or preserve a building. In the judicial opinions, judges often dutifully expound how they weigh the public and private interests. Attorneys who read through the legal reasoning would not be able to accurately predict

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14 The complexity of restitution is a case in point (Levmore 1985; Porat 2009).
which direction the judge would go in their clients’ cases. By contrast, logistic regression models show that the size of the encroached land is the most important predictor of the court decision. This pattern could hardly be detected by the naked eye. One has to properly code the hundreds of cases and use the correct statistical model to tease it out. Comprehensive understanding of the boundary encroachment doctrine in Taiwan and elsewhere is not attainable without the aid of empirical legal research.

Another example is what drives courts’ decision to opt for partition in kind or partition by sale. One of us, in examining the claim by Heller (2008) that resources held in tenancy-in-common would become tragedy of the anti-commons, has used partition data from Taiwan and demonstrated that courts there were inclined to opt for partition by sale when ordering partition in kind would lead to fragmentation of land (Chang 2012), even though the Taiwan Supreme Court and Article 824 of the Taiwan Civil Code prioritize partition in kind. Chang (2012: 536) also demonstrates that district courts in Taiwan order partition in kind in only 23% of overall cases. A studious reader of property law treaties and supreme court partition cases would probably guess that lower courts must use partition in kind in most cases, while this is far from the truth. This is an example of the usefulness of quantitative studies to tease out differences between law in books and law in action.15

How judges or juries weigh facts to assess tort damages is also an important and practical legal question, but is rarely treated in conventional doctrinal studies, which focus on questions/reasoning of law, not questions/reasoning of facts. Normative theories can help us critique the weight given by judges to various factors, but they are not useful in teasing out how much weight has been given to which factor. Here, again, even when judges are simply faithful interpreters/appliers of the law, there is always room for their discretion. How judges have used their discretion is often unascertainable without sophisticated

15 Other empirical works that have found that law in action differs greatly from law on the books are abound. For instance, Chang (2014a) studies administrative appeal review committees under the Ministry of the Interior in Taiwan, which is in charge of conducting merits, de novo review of administrative decisions made by agencies under the Ministry. The finding is that the review committee Chang (2014a) studies rarely, if ever, conducted merit review—it only conducted legality review. That is, administrative agencies have turned the mandate into their discretion.
empirical studies. The pattern of assessing the amount of pain and suffering damages without set schedules or formula is a case in point (for how judges in Taiwan, with large discretion, determined the amount of pain and suffering damages, see Chang et al. 2014; Chang et al. 2015; Chang, Ho, and Hsu 2015).

In summary, this section argues that some empirical studies, even though not serving as the direct basis for normative reasoning, describe valid laws, and thus should be counted as an integral part of legal scholarship even under the paradigm of German jurisprudence, not to mention that in the U.S. and elsewhere.

B. Empirical Research in Common versus Civil Law Countries

Above we note that empirical legal studies are viewed to be valuable in and of itself in the U.S., while in civil-law countries empirical legal studies are still a hard sale in law faculty. In addition to the general explanation as to why social scientific researches flourish in the U.S. but not elsewhere (see, e.g., Garoupa and Ulen 2008; Grechenig and Gelter 2008), we further contend that the differences in the legal theory of judicial adjudication in common versus civil laws contribute to the aforementioned phenomenon.

In common-law countries, where case laws carry a lot of weight and judges unabashedly make policies (or, decide what the law is), it is natural for jurists to sort out the trend in case laws and what drives the federal and state supreme courts in making policies (see, e.g. Ruger et al. 2004). Because juries decide facts despite often being composed of one-shot jurors, they have become a closely-inspected research subject. It is only a step further to draw on quantitative methods to empirically describe case laws and investigate judicial behaviors. The fertile soil in the U.S. for the growth of social scientific research facilitates the burgeoning of empirical legal studies.

In Germany and other civil-law countries influenced by Germany, laws are

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16 See, for example, Holmes (1881: 461): "The prophecies of what the courts will do in fact, and nothing more pretentious, are what I mean by the law."
mainly statutes and administrative rules authorized by statutes. The code-centric design makes statutes the starting point of describing valid laws, if not also the end point. Judges are considered to apply, rather than make, laws (and many judges do refrain from making new laws). This normative prior makes empirical studies of institutional behaviors an afterthought, as judges’ demographic characteristics should not matter and thus need not be studied. This is not to say that European and Asian civil-law jurisdictions do not have any “law and” research. Surely there are, but much of the scholarship is produced by social scientists outside the law faculty, and this type of work is only gradually received by mainstream legal scholars who build their careers on normative and conceptual doctrinal work.

IV. CONCLUSION

Legal scholarship has a wide empirical dimension. On the one hand, the doctrinal study of law sometimes has to go empirical to aptly describe valid law. On the other hand, legal reasoning is normative, but empirical facts are also essential to such normative reasoning. Difference-making facts, which identify causal relations, are indispensable premises in teleological and consequential arguments. And teleological and consequential arguments are prevalent in legislative policy-making and in the judicial reasoning, especially in hard cases. Quantitative empirical legal studies, as many of them aim to make causal inference, thus contribute to normative reasoning. “Is” and “ought” can be united.

Our defense for the role quantitative empirical legal studies play in legal scholarship is fundamental. That is, no matter the jurisdiction is common-law, civil-law, or mixed, difference-making facts have to be relied on to make normative claims. Normative lawyers should be more explicit about the empirical nature and foundation of their normative claims, and be more open to the possibility that their claims might be rejected if the hopefully explicit or still implicit cause-and-effect is not borne out by empirical evidence. Empirical lawyers should strive to make their social-scientific works more normatively relevant by spelling out the related policy issues and how their findings could fit in teleological or consequential arguments. Legal reasoning would not be
complete without carefully formulated normative theory and neatly executed empirical investigation.
References


working paper.


