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The Empirical Foundation of Normative Arguments in Legal Reasoning

Yun-chien Chang*
Peng-Hsiang Wang**

Abstract

While empirical legal studies thrive in the U.S., this is not necessarily the case 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 research makes 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. This is 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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All authors contribute equally and are listed alphabetically. Drafts of this article have been presented at the Foreign Authority Forum at Seoul National University Law School, Empirical Discussion Group Workshop at Oxford University, Law and Economics Workshop at Bucerius Law School at Hamburg, 2015 European Law and Economics Association Annual Conference, and 2015 East Asian Law and Society at Waseda Univeristy at Tokyo. We thank Haksoo Ko, Genevieve Helleringer, Jae-Hyup Lee, Hans-Bernd Schäfer for inviting us to share our thoughts and David Abrams, Jonglk Chon, Kyung-Hoon Chun, Joshua Fischman, Yehonatan Givati, Seong Wook Heo, Jimmy Chia-shin Hsu, Bohyun Kim, Alice Kuo, Sang Won Lee, Alan Miller, Joo Yong Park, Fernanda Pirie, Ronen Perry, Woo-Young Rhee, Hilary Tsai, Hyunah Yang for helpful comments. Juwairiyyah "Jiji" Ubaid, J.D. Candidate 2016, The University of Chicago Law School, provided helpful research assistance. Kreisman Initiative on Housing Law and Policy at the University of Chicago Law School provides part of the funding for research.
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Electronic copy available at: http://ssrn.com/abstract=2733781

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I. INTRODUCTION

The relation between empirical facts and normative arguments in legal research is a century-old issue. In 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 studies[1] 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.

Joshua Fischman makes a seminal contribution to reunite the "is" and "ought" in empirical legal scholarship.[2] Fischman 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.[3] Fischman goes further and elaborates what he means by prioritizing normative goals and setting standards for important empirical works.[4] Specifically, empirical research is important if it could guide legal reform, describe important legal phenomena, and contribute to

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[1] For expanded definition of empirical studies and empirical methods, see, for instance, ROBERT M. LAWLESS et al., EMPIRICAL METHODS IN LAW 7–14 (2009); Lee Epstein & Andrew D. Martin, *Quantitative Approaches to Empirical Legal Research*, *in* THE OXFORD HANDBOOK OF EMPIRICAL LEGAL RESEARCH 901, 905–08 (Peter Cane & Herbert M. Kritzer eds., 2010); Peter Cane & Herbert M. Kritzer, *Introduction*, *in* THE OXFORD HANDBOOK OF EMPIRICAL LEGAL RESEARCH 1, 1–3 (Peter Cane & Herbert M. Kritzer eds., 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.

[2] *See* Joshua B. Fischman, *Reuniting 'Is' and 'Ought' in Empirical Legal Scholarship*, 162 U. PA. L. REV. 117 (2013).

[3] *See id.* at 154.

[4] *See id.* at 157–58.

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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 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.[5] 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. Hanoch Dagan points out that "integrating empirical insight into legal discourse requires translation."[6] Our framework provides such a bridging mechanism. Rubin 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 out 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."[7] 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[8] 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

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[5] *See* Hanoch Dagan, *Law as an Academic Discipline*, Available at SSRN, http://ssrn.com/abstract=2228433, 20 (2013) (arguing that "[l]egal analysis needs both empirical data and normative judgments.").
[6] Hanoch Dagan et al., *Legal Theory for Legal Empiricists*, LAW & SOCIAL INQUIRY (2016), *forthcoming*.
[7] Edward L. Rubin, *Law and and the Methodology of Law*, 1997 WIS. L. REV. 521, 546 (1997) (emphasis added).
[8] Edward Rubin, among others, points out that "the most distinctive feature of standard legal scholarship is its prescriptive voice." Edward L. Rubin, *The Practice and Discourse of Legal Scholarship*, 86 MICH. L. REV. 1835, 1847 (1988).

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.

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. A fact that can be used to justify a normative claim is a "normative reason." Although David Hume famously contended that there is an unbridgeable gap between "is" and "ought,"[9] 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, claiming 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.[10] 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

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[9] *See* DAVID HUME, A TREATISE OF HUMAN NATURE 302 (David Fate Norton & Mary J. Norton eds. 2000 [1739–40]).

[10] *See, e.g.,* THOMAS M. SCANLON, WHAT WE OWE TO EACH OTHER 17 (1998);DEREK PARFIT, ON WHAT MATTERS, VOL. 1 31 (2011).

desires.[11] 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 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.[12] 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

[11] For a difference-making-based theory of normative reasons, *See* Peng-Hsiang Wang & Linton Wang, *Rules as Reason-Giving Facts: A Difference-Making-Based Account of the Normativity of Rules*, *in* PROBLEMS OF NORMATIVITY, RULES AND RULE-FOLLOWING 199, 199–213 (Michael Araszkiewiczet al. eds., 2015).

[12] For various difference-making-based accounts of causality, *see generally* PHYLLIS ILLARI & FREDERICA RUSSO, CAUSALITY: PHILOSOPHICAL THEORY MEETS SCIENTIFIC PRACTICE (2014).

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 weight 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 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 research that studies 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.[13] Even in the U.S., proportionality analysis has been inherent in U.S. Supreme Court jurisprudence since the nineteenth century.[14] The proportionality analysis contains three tests[15]: 1) the suitability test; 2) the necessity test; and 3) the balancing in the narrow sense test. All three tests draw on empirical facts. The "suitability" test examines whether the legal means are rationally related to the policy goals. The means-end relationship is 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.[16] 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 research is 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.

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[13] *See, e.g.,* Alec Stone Sweet & Jud Mathews, *Proportionality Balancing and Global Constitutionalism*, 47 COLUMBIA JOURNAL OF TRANSNATTIONAL LAW 72 (2008);Chengyi Huang & David Law, *Proportionality Review of Administrative Action in Japan, Korea, Taiwan, and China*, *in* RESEARCH HANDBOOK IN COMPARATIVE LAW AND REGULATION (Francesca Bignami & David Zaring eds., 2016), *forthcoming*.

[14] *See* Jud Mathews & Alec Stone Sweet, *All Things in Proportion? American Rights Doctrine and the Problem of Balancing*, 60 EMORY L.J. 101 (2011).

[15] *See* Sweet & Mathews, *supra* note 13, 105–108 .

[16] *See generally* RICHARD O. JR. ZERBE & ALLEN S. BELLAS, A PRIMER FOR BENEFIT-COST ANALYSIS (2006).

B. *Teleological and Consequentialist Arguments*

Difference-making facts are mostly employed in teleological and consequentialist arguments.[17] 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 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's admonition is that empirical researchers should keep E in mind.[18]

Once E is established, or at least clearly formulated, a normative argument

[17] Teleological and consequentialist arguments are defined infra sub-sections 1 and 2, respectively.
[18] *See* Fischman, *supra* note 2.

depends on whether the minor premise (2) stands. The minor premise is empirical; 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,[19] 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 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 the probability is 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

[19] For empirical studies of this issue, see, for instance, Theodore Eisenberg et al., *The Predictability of Punitive Damages*, 26 J. LEGAL STUD. 623 (1997); Theodore Eisenberg et al., *Juries, Judges, and Punitive Damages: Empirical Analyses Using the Civil Justice Survey of State Courts 1992, 1996, and 2001 Data*, 3 J. EMPIRICAL LEGAL STUD. 263 (2006); Theodore Eisenberg & Martin T. Wells, *The Significant Association between Punitive and Compensatory Damages in Blockbuster Cases: A Methodological Primer*, 3 J. EMPIRICAL LEGAL STUD. 175 (2006).

and the relationship has to be narrowly tailored, substantial, and rational, respectively.[20] 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.*, 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.[21] The Court justifies the regulation by the reasonable intuition that requiring prescriptions would encourage more frequent eye examinations, enabling early detection of more serious eye illness.[22] Adopting a regulation that promotes better detection of eye illness is a difference-making fact, which could be more firmly established by quantitative studies.

Grutter v. Bollinger is a landmark case in which the United States Supreme Court upheld the affirmative action admissions policy of the University of Michigan Law School.[23] The Court relied on the inference that students with diverse backgrounds enhance classroom discussions and the educational experience, as well as promote cross-racial understanding.[24] This is a difference-making fact that can be empirically tested. Indeed, Daniel Ho and Mark Kelman use a natural experiment at Stanford Law School to test a similar pedagogical question that asks whether class sizes reduce the gender gap.[25]

In *Young v. American Mini Theatres, Inc.*, the U.S. Supreme Court upheld the Detroit statute that limited the number of adult bookstores or adult theaters within 1000 feet.[26] The Court reasoned that a concentration of adult theaters

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[20] *See* JESSE H. CHOPER, CONSTITUTIONAL LAW 291–93, 313 (2008). It is worth noting here that the strict scrutiny is very close to the proportionality analysis discussed in Part II.A.
[21] 348 U.S. 483 (1955).
[22] *Id.*
[23] 539 U.S. 306 (2003).
[24] *Id.*
[25] *See* Daniel E. Ho & Mark G. Kelman, *Does Class Size Affect the Gender Gap? A Natural Experiment in Law*, 43 J. LEGAL STUD. 291 (2014).
[26] 427 U.S. 50 (1976).

causes the area to become a focus of crime.[27] This "secondary effect" justifies the city ordinance.[28] 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).[29]

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 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 proposes.[30] 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 make a case for or against the means. As a result, the normative significance in this type of research might be more

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[27] *Id.*
[28] *Id.*
[29] 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.
[30] *See* Fischman, *supra* note 2.

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. Once again, using constitutional review as an example: pragmatic judges[31] and scholars would consider multiple values for constitutional review. Philips Bobbit's seminal six modalities of constitutional arguments include "prudential argument," which is "actuated by facts."[32] 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*, Chief Justice Warren, when delivering the unanimous opinion of the court, cited social science and psychology research to demonstrate that the detrimental effect of segregation is unlikely to be undone.[33] 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*, the majority opinion delivered by Justice Kennedy states that criminalizing homosexual conduct subjects gay persons to discrimination and imposes a stigma on them.[34] 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. 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

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[31] *See, e.g.,* Richard A. Posner, *Pragmatic Adjudication*, 18 CARDOZO L. REV. 1 (1996).
[32] *See* PHILIP BOBBITT, CONSTITUTIONAL INTERPRETATION 18–19 (1991).
[33] 347 U.S. 483 (1954).
[34] 539 U.S. 558 (2003).

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 difference-making facts, suffices. A deeper question is why easy cases CAN be solved just by reference to the text or by prioritizing text.[35] 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 difference-making fact—that textual interpretation can indeed and has already helped achieved the aforementioned goals; in other words, adopting the textual interpretation will 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,[36] one may derive a normative conclusion that the government should execute people on the death row and maintain capital punishment. What

[35] *Cf.* Harry T. Edwards, *The Growing Disjunction between Legal Education and the Legal Profession*, 91 MICH. L. REV. 34 (1992) (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.)

[36] *But see* John J. Donohue & Justin J. Wolfers, *Uses and Abuses of Empirical Evidence in the Death Penalty Debate*, 58 STAN. L. REV. 791 (2006)(challenging the deterrence effect of death penalty.)

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.[37]

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.[38] Without observing the counterfactuals, there is no way to establish causal relations. This is the fundamental problem of causal inference.[39]

While whether and what type of empirical examination can identify causal inference is still heavily debated within statistical science,[40] we take the position that carefully designed empirical research enhances our understanding of the relationship between means and ends (or, X on Y), and is thus relevant to normative legal arguments.[41] 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

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[37] The literature on the morality of the death penalty is vast. For two different positions, *See* for example Jimmy Chia-Shin Hsu, *Does Communicative Retributivism Necessarily Negate Capital Punishment?*, CRIM. L. & PHIL. 1 (2013) and Carol S. Steiker, *No, Capital Punishment Is Not Morally Required: Deterrence, Deontology, and the Death Penalty*, 58 STAN. L. REV. 751 (2005).

[38] *See* HOWELL E. JACKSON et al., ANALYTICAL METHODS FOR LAWYERS 539–41 (2003).

[39] *See* LEE EPSTEIN & ANDREW D. MARTIN, AN INTRODUCTION TO EMPIRICAL LEGAL RESEARCH 6 (2014).

[40] *See id.* at 193–195.

[41] *See id.* at 14.

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.[42] 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 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

[42] There is a vast literature on this issue. For the literature with an emphasis on empirical legal studies, see, for instance, Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1 (2002); EPSTEIN & MARTIN, *supra* note 39; LAWLESS et al., *supra* note 1; Jonah B. Gelbach & Jonathan Klick, *Empirical Law and Economics*, *in* OXFORD HANDBOOK OF LAW AND ECONOMICS (Francesco Parisi ed. 2015 *forthcoming*); D. James Greiner, *Causal Inference in Civil Rights Litigation*, 122 HARV. L. REV. 533 (2008); Steven L. Willborn & Ramona L. Paetzold, *Statistics Is a Plural Word*, 122 HARVARD LAW REVIEW FORUM 48 (2009); Daniel E. Ho, *Randomizing... What? A Field Experiment of Child Access Voting Laws*, 171 J. INSTITUTIONAL & THEORETICAL ECON. 150 (2015). For the literature in statistics and social science, see, for example, Kenneth A. Bollen & Judea Pearl, *Eight Myths About Causality and Structural Equation Models*, *in* HANDBOOK OF CAUSAL ANALYSIS FOR SOCIAL RESEARCH 301, (Stephen L. Morgan ed. 2013); Troyen A. Brennan, *Causal Chains and Statistical Links: The Role of Scientific Uncertainty in Hazardous-Substance Litigation*, 73 CORNELL L. REV. 469 (1987); Jeremy Freese & J. Alex Kevern, *Types of Causes*, *in* HANDBOOK OF CAUSAL ANALYSIS FOR SOCIAL RESEARCH 27, (Stephen L. Morgan ed. 2013);Herbert L. Smith, *Research Design: Toward a Realistic Role for Causal Analysis*, *in* HANDBOOK OF CAUSAL ANALYSIS FOR SOCIAL RESEARCH 45 (Stephen L. Morgan ed. 2013); ILLARI & RUSSO, *supra* note 12.

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[43] and the behavioral pattern of judges and juries.[44] 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[45] is the classic approach. Criminal law scholars examine the effect of various law enforcement measures such as increasing the number of police.[46] Other scholars study whether statutes, case laws, administrative rules, internal by-laws, and so on, change people's behaviors.[47]

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[43] *See, e.g.,* Kuo-Chang Huang, *How Legal Representation Affects Case Outcome: An Empirical Perspective from Taiwan*, 5 J. EMPIRICAL LEGAL STUD. 197 (2008);David S. Abrams & Albert H. Yoon, *The Luck of the Draw: Using Random Case Assignment to Investigate Attorney Ability*, 74 U. CHI. L. REV. 1145 (2007);Yun-Chien Chang et al., *Attorney and Judge Experience in Torts Litigation: An Empirical Study*, working paper (2015).

[44] *See, e.g.,* LEE EPSTEIN et al., THE BEHAVIOR OF FEDERAL JUDGES: A THEORETICAL AND EMPIRICAL STUDY OF RATIONAL CHOICE (2013);CASS R. SUNSTEIN et al., PUNITIVE DAMAGES: HOW JURIES DECIDE (2002);VALERIE P. HANS, BUSINESS ON TRIAL: THE CIVIL JURY AND CORPORATE RESPONSIBILITY (2000);Shari Seidman Diamond et al., *Damage Anchors on Real Juries*, 8 J. EMPIRICAL LEGAL STUD. 148 (2011);Yun-Chien Chang et al., *Pain and Suffering Damages in Wrongful Death Cases: An Empirical Study*, 12 J. EMPIRICAL LEGAL STUD. 128 (2015);Yun-Chien Chang et al., *Pain and Suffering Damages in Personal Injury Cases: An Empirical Study*, working paper (2014);Theodore Eisenberg & Michael T. Heise, *Plaintiphobia in State Courts Redux? An Empirical Study of State Trial Courts on Appeal*, 12 J. EMPIRICAL LEGAL STUD. 100 (2015);Theodore Eisenberg & Kuo-Chang Huang, *The Effect of Rules Shifting Supreme Court Jurisdiction from Mandatory to Discretionary—an Empirical Lesson from Taiwan*, 32 INTERNATIONAL REVIEW OF LAW & ECONOMICS 3 (2012);Jeffrey J. Rachlinski et al., *Inside the Bankruptcy Judge's Mind*, 86 B.U. L. REV. 1227 (2006);Chris Guthrie et al., *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1 (2007);Jeffrey J. Rachlinski et al., *Does Unconscious Racial Bias Affect Trial Judges?*, 84 NOTRE DAME L. REV. 1195 (2009);Jeffrey J. Rachlinski et al., *Heuristics and Biases in Bankruptcy Judges*, 163 J. INSTITUTIONAL & THEORETICAL ECON. 167 (2007);Chris Guthrie et al., *Inside the Judicial Mind*, 86 CORNELL L. REV. 777 (2000).

[45] *See* Roscoe Pound, *Law in Books and Law in Action*, 44 AM. L. REV. 12 (1910).

[46] *See, e.g.,* Daniel E. Ho, *Fudging the Nudge: Information Disclosure and Restaurant Grading*, 122 YALE L.J. 574 (2012);Daniel E. Ho et al., *Do Police Reduce Crime? A Reexamination of a Natural Experiment*, *in* EMPIRICAL LEGAL ANALYSIS: ASSESSING THE PERFORMANCE OF LEGAL INSTITUTIONS 125, (Yun-Chien Chang ed. 2014);Ming-Jen Lin, *More Police, Less Crime: Evidence from Us State Data*, 29 INT'L REV. L. & ECON. 73 (2009);Thomas Miles, *An Empirical Analysis of the Fbi Ten Most Wanted List*, 5 J. EMPIRICAL LEGAL STUD. 275 (2008).

[47] *See, e.g.,* Ryan Bubb, *The Evolution of Property Rights: State Law or Informal Norms?*, 56 J. L. &

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.[48] If judges or juries suffer from cognitive biases such as the anchoring effect,[49] 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[50]—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

ECON. 555 (2013).

[48] *See* JOHN RAWLS, A THEORY OF JUSTICE 208–10 (Revised ed. 1999);RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 336–39 (8 ed. 2011).

[49] *See* Yun-Chien Chang et al., *Anchoring Effect in Real Litigations*, working paper (2016);Doron Teichman et al., *Anchoring Legal Standards: An Empirical Examination*, J. EMPIRICAL LEGAL STUD. (2016 *forthcoming*);Doron Teichman & Eyal Zamir, *Judicial Decisionmaking: A Behavioral Perspective*, *in* THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW 664 (Eyal Zamir & Doron Teichman eds., 2014).

[50] *See* John J. Donohue, *The Death Penalty*, *in* ENCYCLOPEDIA OF LAW AND ECONOMICS (2013), available at http://works.bepress.com/john_donohue/104.

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.[51] 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.

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[51] *See* J.J. Prescott & J. E. Rockoff, *Do Sex Offender Registration and Notification Laws Affect Criminal Behavior?*, 54 J.L. & ECON. 161 (2011).

III. A Descriptive Theory of Legal Reasoning

American legal philosophers are interested in exploring "what is law?",[52] but few, if any, spend their career defining precisely what legal scholarship[53] 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.[54]

In Germany and many other countries influenced by German jurisprudence, legal scholarship is *Rechtsdogmatik*, translated as "legal doctrine",[55] "legal dogmatics",[56] or "the doctrinal study of law."[57] 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.*"[58] Put differently, the doctrinal study of law interprets and systematizes valid law.[59]

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.[60] Alexy does not systematically articulate the empirical dimension of the doctrinal study of law, although he does point out that this dimension includes describing valid law and using empirical facts in legal arguments. We discussed the latter in the previous part. This part focuses on the former. Section A elaborates what kind of empirical works exhibit the empirical

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[52] *See* RONALD M. DWORKIN, LAW'S EMPIRE (1986);SCOTT SHAPIRO, LEGALITY (2011).
[53] For such endeavors, *see, e.g.,* Rubin, *supra* note 7; Rubin, *supra* note 8; Dagan, *supra* note 5; Dagan et al., *supra* note 6; Edwards, *supra* note 7.
[54] *But cf.* Dagan et al., *supra* note 6.
[55] ALEKSANDER PECZENIK, SCIENTIA JURIS: LEGAL DOCTRINE AS KNOWLEDGE OF LAW AND AS A SOURCE OF LAW 1–2 (2005).
[56] Aulis Aarnio et al., *The Foundation of Legal Reasoning III*, 12 RECHTSTHEORIE 423 (1981).
[57] AULIS AARNIO, ESSAYS ON THE DOCTRINAL STUDY OF LAW 19–24 (2011);ALF ROSS, ON LAW AND JUSTICE 10–11 (1959).
[58] Aarnio et al., *supra* note 56.
[59] *See* AULIS AARNIO, REASON AND AUTHORITY: A TREATISE ON THE DYNAMIC PARADIGM OF LEGAL DOGMATICS 75 (1997);PECZENIK, *supra* note 55.
[60] *See* ROBERT ALEXY, A THEORY OF LEGAL ARGUMENTATION 251–52 (1989).

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 (such as legislators and judges) employ in enacting, applying, or interpreting legal norms and what factors influence their institutional behaviors, but it does not necessarily evaluate the merits of those reasons or factors. The usefulness of descriptive legal reasoning should not be underestimated. As Theodore Eisenberg 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."[61] 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 furthers our understanding on 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

[61] Theodore Eisenberg, *Empirical Methods and the Law*, 95 J. AM. STATISTICAL ASSOCIATION 665, 667 (2000).

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.[62] 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.[63] 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 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,[64] in examining the claim by Michael Heller[65] that

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[62] The complexity of restitution is a case in point. *See* Saul Levmore, *Explaining Restitution*, 71 VA. L. REV. 65 (1985);Ariel Porat, *Private Production of Public Goods: Liability for Unrequested Benefits*, 108 MICH. L. REV. 189 (2009).

[63] *See* Yun-Chien Chang, *To Tear Down or Not to Tear Down? An Empirical Study of Boundary Encroachment Cases in Taiwan*, *in* EMPIRICAL LEGAL ANALYSIS: ASSESSING THE PERFORMANCE OF LEGAL INSTITUTIONS 144, 144–58 (Yun-chien Chang ed. 2014).

[64] *See* Yun-Chien Chang, *Tenancy in "Anticommons"?: A Theoretical and Empirical Analysis of Co-Ownership*, 4 J. LEGAL ANALYSIS 515 (2012).

[65] *See* MICHAEL A. HELLER, THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES (2008).

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, even though the Taiwan Supreme Court and Article 824 of the Taiwan Civil Code prioritize partition in kind. One of us also demonstrates that district courts in Taiwan order partition in kind in only 23% of overall cases.[66] 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.[67]

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 empirical studies. The pattern of assessing the amount of pain and suffering damages without set schedules or formula is a case in point.[68]

In summary, this section argues that some empirical studies, even when not serving as the direct basis for normative reasoning, describe valid laws. This type of empirical work should be counted as an integral part of legal scholarship even

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[66] *See* Chang, *supra* note 64.

[67] Other empirical works that have found that law in action differs greatly from law on the books are abound. For instance, one of us studies administrative appeal review committees under the Ministry of the Interior in Taiwan, which is in charge of conducting *de novo* review of merits of administrative decisions made by agencies under the Ministry. The finding is that the review committee studied rarely, if ever, conducted merit review—it only conducted legality review. That is, administrative agencies have turned the mandate into their discretion. *See* Yun-Chien Chang, *An Empirical Study of Administrative Appeal in Taiwan: A Cautionary Tale*, 23 TRANSNAT'L L. & CONTEMP. PROBS. 261 (2014).

[68] For how judges in Taiwan, with large discretion, determined the amount of pain and suffering damages, *See* Yun-Chien Chang et al., *Non-Pecuniary Damages for Defamation, Personal Injury, and Wrongful Death: An Empirical Analysis of Court Cases in Taiwan*, 4 CHINESE J. COMP. L. (2016), *forthcoming*; Chang et al., *supra* note 44; Chang et al., *supra* note 44.

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 research flourishes in the U.S. but not elsewhere,[69] 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),[70] 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.[71] 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 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

[69] *See, e.g.,* Nuno Garoupa & Thomas S. Ulen, *The Market for Legal Innovation: Law and Economics in Europe and the United States*, 59 ALA. L. REV. 1555 (2008);Kristoffel Grechenig & Martin Gelter, *The Transatlantic Divergence in Legal Thought: American Law and Economics Vs. German Doctrinalism*, 31 HASTINGS INT'L & COMP. L. REV. 295 (2008).

[70] As Justice Holmes famously put it: "The prophecies of what the courts will do in fact, and nothing more pretentious, are what I mean by the law." OLIVER WENDELL HOLMES, THE COMMON LAW 461 (1881).

[71] *See, e.g.,* Theodore W. Ruger et al., *The Supreme Court Forecasting Project: Legal and Political Science Approaches to Predicting Supreme Court Decisionmaking*, 104 COLUM. L. REV. 1150 (2004).

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 some, 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 contribute to normative reasoning because many of them aim to make causal inference. "Is" and "ought" can be united.

Quantitative empirical legal studies are fundamental in legal scholarship. That is, no matter whether 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.