Law, Coercion and Folk Intuitions

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Abstract—In discussing whether legal systems are necessarily coercive, legal philosophers usually appeal to thought experiments involving angels or other morally driven beings who need no coercion to organise their social lives. Such appeals have invited criticism. Critics have not only challenged the relevance of such thought experiments to our understanding of legal systems; they have also argued that, contrary to the intuitions of most legal philosophers, the 'man on the Clapham Omnibus' would not hold that there is law in a society of angels because the view that law is necessarily coercive 'enjoys widespread support among laypersons'. This is obviously an empirical claim. Critics, however, never systematically polled the 'man on the Clapham Omnibus'. We boarded that bus. This article discusses findings from five empirical studies on the relationship between law and coercion.

Keywords: experimental jurisprudence, legal philosophy, law and coercion, empirical legal studies, general jurisprudence

1. Introduction

Legal philosophers have long debated whether legal systems are *necessarily* coercive or only *contingently* so. Up until recently, the almost consensual view in anglophone analytical jurisprudence has been that legal systems are contingently coercive: despite our legal systems being coercive, they could have been

otherwise.[1] They are coercive just because we, as fallible and morally imperfect beings, would not comply with our laws and cooperate but for coercion. Were we angels or other perfectly cooperative beings, a non-coercive legal system could have existed.

Recently, however, this traditional view has invited criticism. The main point of contention lies in the thought experiments used to support the traditional view: experiments depicting a society of angels or other morally driven subjects who do not need coercion to organise their social lives. Critics have not only argued that intuitions about such thought experiments do not bear on our understanding of *actual* legal systems,[2] but also that 'the man on the Clapham Omnibus'—as Frederick Schauer puts it[3]—would exhibit significantly different intuitions about such scenarios. Laypeople would not hold that there is law in a society of angels because the view that law is *necessarily* coercive 'enjoys widespread support among laypersons'—or so the critics claim.[4] This is obviously an empirical assumption about laypeople's intuitions.[5] Critics, however, never systematically polled the 'man on the Clapham Omnibus'. We boarded that bus.[6]

We conducted five pre-registered studies to investigate folk intuitions about the relationship between law and coercion. Our main goal was to assess whether folk intuitions about the relationship between law and coercion match the intuitions traditionally held by legal philosophers from the Anglo-American analytic tradition (what we call 'Hartian–Razian intuitions'). This article presents the findings from these studies and discusses their repercussions on recent debates on the topic.

Because the very relevance of folk intuitions and empirical studies to philosophical discussions about law and coercion is unclear, we begin—in section 2—by clarifying some methodological assumptions about both the role of folk intuitions and our empirical studies in law and coercion debates. Section 3 introduces Study 1, which tested folk intuitions about the society of angels thought experiment. Section 4 introduces Study 2, where we tested folk intuitions about the possibility of non-coercive *human* legal systems.

Section 5 addresses an objection against our findings from Studies 1 and 2: that these studies show that our conceptual practices track people's *moral* judgments

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[1] See, eg HLA Hart, 'Theory and Definition in Jurisprudence' (1955) 29 Proceedings of the Aristotelian Society, suppl vols 213, 253; Joseph Raz, *Practical Reason and Norms* (OUP 1999) 159; John Gardner, 'Law's Aim in Law's Empire' in Scott Hershovitz (ed), *Exploring Law's Empire* (OUP 2006) 208–9; Scott Shapiro, *Legality* (Harvard UP 2011) 173–4; Leslie Green, 'The Forces of Law: Duty, Coercion, and Power' (2016) 29 Ratio Juris 164.

[2] Brian Z Tamanaha, 'Pragmatic Reconstruction in Jurisprudence: Features of a Realistic Legal Theory' (2021) 34 Canadian Journal of Law & Jurisprudence 171; Kenneth Himma, *Coercion and the Nature of Law* (OUP 2020) 232.

[3] Frederick Schauer, *The Force of Law* (Harvard UP 2015) 2.

[4] Himma (n 2) viii.

[5] In this article, we use 'laypeople's intuitions' and 'folk intuitions' interchangeably.

[6] A caveat about our studies: we did not pre-screen participants to ensure a specific demographic distribution. Our studies were conducted via Prolific.co on a first-come, first-served basis. Thus, readers should not take the claim that we 'boarded that bus' as an indication that our studies were meant to provide an accurate picture of the intuitions of a specific demographic. Across our five studies, we polled a total of 1140 participants, out of which 639 self-identified as male, 488 as female and 13 as non-binary. Our participants' age ranged from 18 to 69 years, the average being 26.78. Most participants polled had no formal training in law (1070); 58 were law students and 18 were lawyers.

rather than people's judgments about the coerciveness of legal systems. To analyse the merits of this objection, we discuss the results of Study 3, where we presented participants with vignettes about evil, but equally cooperative, demons.

In section 6 we discuss the findings of Study 4 and hint at an overarching explanation for why people hold competing intuitions about the necessity of coercion. Specifically, the study suggests that the degree of abstractness in which one considers the necessity of coercion influences their answers. With that, a question arises as to whether philosophers should prefer concrete or abstract intuitions. Here, we reckon that concrete thought experiments, like the society of angels, might be more helpful to understand our conceptual practices than purely abstract reasoning. If, however, the issue is simply one of concreteness, we should be able to come up with concrete thought experiments involving *humans*. That is what we did in Study 5, also described in section 6. The results show that, under more concrete circumstances, participants are willing to accept that non-coercive legal systems are possible even in human societies.

2. *The Place of Folk Intuitions in Law and Coercion Debates*

HLA Hart's *The Concept of Law* opened with the statement that the book was aimed at furthering the understanding of 'law, coercion, and morality as different but related social phenomena'.[7] Whether he succeeded in his aim has been the object of lengthy philosophical discussions over the past 60 years. But this remark—that a book about the concept of law aims at furthering our understanding of the relations between law, coercion and morality—reminds us of the centrality of the relationship between law and coercion to the understanding of the concept of law.

Coercion has been seen by Anglo-Saxon philosophers as an intrinsic part of legal systems and legal governance at least since Hobbes, Bentham and Austin. We are told that 'covenants without swords are but words' and that terms like 'sanction', 'command' and 'duty', when used in legal contexts, express 'the same complex notion'.[8] In one way or another, these views are unsurprising; they may be thought to be the philosophical expression of the way most people think and speak about law.[9] After all, as Frederick Schauer puts it, 'It has long seemed self-evident—at least to ordinary people—that coercion, sanctions, threats, punishment, and brute force lie at the heart of the idea of law'.[10] To further illustrate this point, Scott Shapiro invites us to explain what the law is to a five-year-old. According to him, most people would say something along the following lines:

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[7] HLA Hart, *The Concept of Law* (Joseph Raz and Penelope A Bulloch eds, 3rd edn, OUP 2012) v.

[8] John Austin, *The Province of Jurisprudence Determined* (Wilfrid Rumble ed, CUP 1995) 24.

[9] Ken Himma has recently examined dictionary definitions of 'law' and, on that basis, argued that ordinary usage provides prima facie evidence that people think and speak about a coercive system when they think and speak about legal systems. See Himma (n 2) ch 3.

[10] Schauer (n 3) 23.

> The law consists of those rules that if a grown-up breaks them, people whose job it is to catch and punish rule breakers can catch and punish the grown-up, by forcing him or her either to pay some money or to get a time-out in a place called 'jail'.[11]

Of course, the story people would tell a five-year-old is a simplification of their views. But it is a simplification of an idea that, as far as anecdotal evidence goes, many seem to think true, if not obviously so: that legal systems are necessarily (or intrinsically)[12] coercive.

But philosophers such as Hart and Raz disagree. Hart, for example, claimed that it was 'easy to imagine material or psychological conditions which would make it very arbitrary to deny the title of a legal system to a system which had all the normal features … except sanctions'.[13] And to further illustrate the point, Hart asked us to imagine a scenario where people 'were more like angels than they are and required not coercion but only to be told what to do both in general and where the rules were unclear by courts in particular cases'.[14] Raz makes a similar point, and boldly claims that the system in the society of angels would be recognised as a legal system 'by all'.[15]

These claims suggest that many seem to have appealed to folk intuitions in support of their views about the necessity of coercion to legal systems. One group of philosophers concludes that folk intuitions support the necessity (or at least the centrality)[16] of coercion, while another group (which includes Hart and Raz) argues that folk intuitions support that coercion is contingent to legal systems. Our article aims to shed light on this specific controversy by providing additional and more systematic evidence about the content of folk intuitions. But suppose for a moment that we could resolve this dispute about what the folk think in a decisive manner. What then would follow for philosophical discussions about the coerciveness of law?

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[11] Shapiro (n 1) 51.

[12] For the purposes of this article, we will treat the phrases 'intrinsically coercive' and 'necessarily coercive' as synonymous and overlook the distinction between intrinsic and necessary properties since nothing in the article will turn on it. For a defence of the distinction and its relevance, see Kit Fine, 'Essence and Modality' (1994) 8 Philosophical Perspectives 1.

[13] Hart, 'Theory and Definition in Jurisprudence' (n 1) 253.

[14] ibid.

[15] Raz, *Practical Reason and Norms* (n 1) 159.

[16] It is important to keep claims about the *necessity* of coercion separate from claims about the *centrality* of coercion to legal systems. This is particularly important given that one of the prominent figures in the contemporary debate, Frederick Schauer, explicitly rejects the relevance of claims about conceptual or metaphysical necessity and urges us to reorient jurisprudential debates about the place of coercion in law to a debate about the importance and centrality of coercion. See Schauer (n 3) 3–4, 36, 40 and *passim*. As will be visible later, our studies do not presuppose that people treat (or should treat) the concept LEGAL SYSTEM as an essentialist concept (ie one that is analysable in terms of necessary and sufficient conditions). In our studies, we asked participants to rank on a scale the *degree* that they believed a given system was a legal system. Our studies were framed to both measure how *central* coercion was to people's conceptual practices and ascertain whether people regard a non-coercive legal system as being compatible with the way they apply the concept (which is relevant to discussions about conceptual possibility and necessity). However, for brevity's sake, and given the way the traditional debate about the coerciveness of law is shaped, we have focused our analyses and discussions on necessity claims (instead of claims about centrality)— though our results would be roughly the same if we had written in terms of *centrality*. We thank one of the reviewers for pressing us to clarify these points.

The answer to this question turns on how to frame the question about the necessity of coercion to legal systems. Here we will consider two possible frames.[17] The first casts the debate as a discussion about the *conceptual* necessity of coercive legal systems. For our purposes, 'conceptual necessity' should be understood as 'necessary given our conceptual practices', ie necessary given the way we commonly think and speak about legal systems. Framed this way, the discussion about the necessity of coercion to legal systems clearly concerns *our representation* of legal systems, and not legal systems in and of themselves. Those who engage in such a discussion would therefore be primarily interested in how we use LEGAL SYSTEM.[18]

There might be good reasons to frame the discussion this way. Some, for example, argue that institutions like legal systems are entirely the product of our thoughts and linguistic practices.[19] As a result, our collective thoughts and linguistic practices about legal systems determine what is possible and what is necessary for legal systems. What matters for our purposes is not whether this view is sound,[20] but that, when framed this way, it becomes easy to see that folk intuitions are indispensable to the discussion. That is because, all things being equal, folk intuitions about what counts as a legal system provide good evidence of how people think and speak about legal systems; they work as direct evidence of our conceptual practices. After all, under this framing, if we want to know if legal systems are intrinsically coercive or not, we would have to consult whether people would (tend to) extend LEGAL SYSTEM to some non-coercive institutions. That, of course, is (at least partly) an empirical question that would be best tackled by methods of experimental psychology. In fact, some prominent advocates of such approach (usually known as *modest conceptual analysis*)[21] have explicitly drawn attention to the relevance of empirical methods:

> Our account sees conceptual analysis as an empirical matter in the following sense. It is an empirical fact that we use a certain term for the kinds of situations and particulars that we do in fact use it for, and the conclusions we come to on the subject are fallible

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[17] A third possible frame would be to see the relevant discussion as one about *natural* (or, as we sometimes call it in the article, 'pragmatic') necessity, ie a discussion about what is necessarily true given a set of empirical facts which are characteristic of a species living under a specific institutional system. Whether the natural necessity of coercion to legal systems entails its metaphysical or conceptual necessity is an open question. Though we do not address this question directly, later in the article (section 4C) we discuss that *beliefs* about coercion being naturally (or pragmatically) necessary in human societies is one of the possible explanations for people's judgments about the conceptual (im)possibility of a non-coercive legal system in human societies.

[18] Himma (n 2) 36, 42. How we use a concept (like LEGAL SYSTEM) involves (at least) beliefs about the concept's *extension*—the things it applies to—and beliefs about the concept's *content*—the criteria that determine what *counts as* part of the concept's extension. For an examination of these notions and relevance to the legal domain, see Martin Kelly, 'The Loquacious Legislature: Are Statutes "Always Speaking"?' (PhD thesis in Law, University of Edinburgh 2021).

[19] Brian Leiter, 'The Demarcation Problem in Jurisprudence: A New Case for Scepticism' (2011) 31 OJLS 663, 667; Alex Langlinais and Brian Leiter, 'The Methodology of Legal Philosophy' in Herman Cappelen, John Hawthorne and Tamar Szabó (eds), *The Oxford Handbook of Philosophical Methodology* (OUP 2016) 680; Schauer (n 3) 40.

[20] For discussion of this claim in the context of law and coercion debates, see Lucas Miotto, 'From Angels to Humans: Law, Coercion, and the Society of Angels Thought Experiment' (2021) 40 Law and Philosophy 277.

[21] Frank Jackson, *From Metaphysics to Ethics: A Defence of Conceptual Analysis* (OUP 1998) ch 2.

… We also noted that conceptual analysis in our sense is of a kind with what cognitive psychologists do when they investigate the young child's concept of *faster than*, and political scientists do when they investigate different voters' concept of *socialist*, and these are, of course, empirical investigations.[22]

The second way to frame the discussion about the necessity of coercion to legal systems is as a discussion about the *metaphysical* necessity of coercive legal systems. This would involve determining whether a non-coercive legal system is inconsistent with the general principles and categories that structure legal reality. Contrary to the discussion about conceptual necessity (and possibility), this is not (primarily) a discussion about our representation of legal systems.[23] Rather, it is a discussion at the object-level; a discussion about legal systems *qua* the object of our representation. Precisely because it is not entirely obvious what it would take to determine whether a legal system *qua* the object of our representation is necessarily coercive or not, the role of folk intuitions may also be unclear.

The role of intuitions in claims about metaphysical possibility and necessity is a controversial topic in philosophy.[24] Here we are not partaking in such controversies, but simply highlighting some general, and relatively uncontroversial, points about the role of folk intuitions in discussions about metaphysical possibility and necessity. One corollary about metaphysical possibility is that whatever is *actual* is metaphysically possible. We can, therefore, use our background knowledge and experience of actual scenarios as baselines for metaphysical possibility: the closer a given scenario is from the baseline, the more confident we can be that the scenario is metaphysically possible.[25] When several individuals who have some background knowledge and experience of actual legal systems, for example, voice the intuition that an institution described in a hypothetical scenario is a *legal system*, this gives us *a* reason to believe in the metaphysical possibility of the described institution. Of course, the reason is defeasible.[26] But in normal conditions,[27] intuitive judgments (especially those that are *vastly shared*) are not something that can be dismissed in an argumentative exchange; they give us defeasible reason for metaphysical possibility and must be explained away by opponents. We could say,

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[22] ibid 47.

[23] Of course, if legal reality is entirely constituted by our thought and talk about the law, then the discussion about the conceptual and metaphysical possibility of non-coercive legal systems would be one and the same.

[24] See, eg Timothy Williamson, 'Armchair Philosophy, Metaphysical Modality and Counterfactual Thinking' (2005) 105 Proceedings of the Aristotelian Society 1; Timothy Williamson, *The Philosophy of Philosophy* (Blackwell Publishing 2007); Anna-Sara Malmgren, 'Rationalism and the Content of Intuitive Judgements' (2011) 120 Mind 263; Georgi Gardiner, 'Normalcy and the Contents of Philosophical Judgements' (2015) 58 Inquiry 700; Alexander Geddes, 'Judgements about Thought Experiments' (2018) 127 Mind 35.

[25] Relatedly, the more distant a case is from our background knowledge and experience, the less confident in its metaphysical possibility we should be. For a discussion of related reliability worries in philosophical analysis, see Edouard Machery, *Philosophy Within Its Proper Bounds* (OUP 2017).

[26] Those who voice the intuition may have incomplete background knowledge or a biased experience, or may simply make an error of attention while assessing a hypothetical scenario based on their background knowledge and experience. Hence, it is always possible that these intuitive judgments do not reflect how actual legal systems really look.

[27] By 'normal conditions' we mean circumstances where, for example, the ones who voice their intuitions have the relevant background knowledge or experience, have no vested interest in voicing a particular intuition, and have done so in the absence of peer-pressure or coercion and in good faith.

therefore, that intuitive judgments about metaphysical possibility at least shift the burden of proof in an argumentative exchange. Even if weak, their presence gives opponents the argumentative burden to defeat them.

Though empirical studies about folk intuitions are not often used in inquiries about metaphysical possibility and necessity, they can still play an interesting role in such inquiries. For one, philosophers who make claims about metaphysical possibility and necessity often draw conclusions from thought experiments. Empirical studies can then help us determine the spread or acceptability of these conclusions. If they are widely shared, we can presume that they are more grounded in our background knowledge and experience, which can be used as an indication of their reliability. If they are not, then the philosopher who advanced them has a greater burden of explanation.

The preceding discussion suggests that folk intuitions and empirical studies about such intuitions play, or can play, important roles in inquiries about possibility and necessity. Folk intuitions are, of course, more important if we frame such discussions in terms of *conceptual* possibility and necessity and more modest if we frame them in terms of *metaphysical* possibility and necessity. This is central to the discussion about the necessity of coercion to legal systems. That is because, as we have seen, philosophers such as Hart and Raz have argued that non-coercive legal systems are *possible* on the basis of thought experiments depicting angels or other morally driven beings. At face value, the *intuitive* judgment drawn from such thought experiments are at odds with what many think to be the common-sense view about the coerciveness of legal systems. And if that is so, then Hart and Raz's claim about the possibility of non-coercive legal systems either do not reflect our conceptual practices—which is a serious problem if Hart and Raz are viewed as making a claim about what is conceptually possible of legal systems—or should be viewed as less reliable and in need of more extraordinary justification if they are viewed as claims about metaphysical possibility.

Anecdotal evidence aside, we cannot assume (like some have done) that Hart and Raz's intuitions about the possibility of non-coercive legal systems indeed clash with folk intuitions because the latter have never been systematically studied. In what follows we detail what we have found while empirically studying folk intuitions about coercive and non-coercive legal systems.

3. Testing the Angels

Our first study tested people's intuitions regarding the society of angels thought experiment. This thought experiment is presented in the literature as a reason for the possibility of non-coercive legal systems. It has been suggested that the intuition that there is a *legal system* in the society of angels scenario would be shared by laypeople. Raz, for example, claims that the system described in his version of the thought experiment 'would be recognized as one by all despite its lack of sanctions'.[28] As our preceding discussion about the role of intuitions indicates, if

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[28] Raz, *Practical Reason and Norms* (n 1) 159.

Raz is right, then the case against the necessity of coercion to legal systems would become stronger. With this in mind, we presented participants with the following vignette:

> Imagine a society of morally perfect and cooperative angels. Despite being morally perfect and cooperative, the angels still make use of a series of interrelated rules to organise numerous aspects of their society: the form of their government, the distribution of tasks and services, traffic, taxation, among other things. This society also employs a small group of angels to resolve potential misunderstandings or disputes about the existing rules. Nonetheless, because the angels are morally perfect and cooperative, there are neither rules that impose penalties for rule-breaking, nor are there individuals tasked to ensure compliance with the rules.
> How much do you agree or disagree with the following statement?
> The society described in the scenario above has a legal system.

Before conducting the study, we predicted that laypeople would react to this case much in the same way as Raz conjectured. We did so because the prediction represents the orthodox view in the literature and because of anecdotal evidence about the thought experiment's persuasiveness, including evidence gathered from talking to undergraduate and graduate students about the topic. Our pre-registered hypothesis was formulated as follows:

> (H1) People tend to regard the society of angels' scenario as an example of a legal system.[29]

A. Method

We recruited 202 participants through Prolific.co to complete our questionnaire on Qualtrics.[30] Of these, 104 participants were excluded for failing the pre-registered attention checks,[31] leaving a final sample of 98 participants (mean age = 26.35 years, 35 females; 88 participants reported no formal training in law).[32]

B. Results

The results, depicted in [Figure 1], show that most participants shared the Hartian–Razian intuitions regarding the society of angels. Overall, participants' mean agreement with the statement that the society of angels has a legal system

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[29] <https://aspredicted.org/blind.php?x=z8nq59>.

[30] All stimuli, data and code used in the analyses reported in this article are available as Supplementary Materials <https://osf.io/k987d/?view_only=0eeaade030cc4206af5821d84c5c7c70>.

[31] This number is unusually high. We believe that this was caused by the phrasing of the attention check for the first stage of data collection, which was hard to follow. See ibid for the precise phrasing.

[32] Data collection for Study 1 followed two stages. In the first stage, we employed the vignette as quoted in the main text—alluding to the presence or absence of sanctions as the presence or absence of rules that impose penalties for rule-breaking. In the second stage, we made one subtle change: we replaced 'penalties for rule-breaking' with 'sanctions'. Our results were robust to this change (see ibid), so we collapsed data from both stages for the analyses reported in Study 1.

Judgments about the society of angels thought experiment
N=98

'The society described in the scenario above has a legal system.'

Figure 1. Most participants shared Hartian–Razian intuitions.

(4.44) was significantly higher than the midpoint, as revealed by the pre-registered one-sample *t*-test ($t(97) = 2.66$, $p = 0.004$, $d = 0.27$).[33]

C. Discussion

Most participants agreed that the society of angels has a legal system; but the majority of those chose the alternatives labelled 'Somewhat agree (5)' and 'Agree (6)' (53%) instead of the more decisive 'Strongly agree (7)' (6.12%). Moreover, many participants (34.7%) disagreed with the statement, selecting values lower than the midpoint of the scale. What can we make of this?

First, we can say with confidence that, contrary to what many take to be the folk view about the coerciveness of legal systems, our conceptual practices do not strongly favour the idea that legal systems are necessarily coercive. On average, most participants show *some* support for the opposite view and are thus willing to apply the term 'legal system' to non-coercive systems like the one presented in the society of angels vignette. This takes some of the sting from the critiques of the use of this thought experiment. For example, Ken Himma argues that Raz's use of the thought experiment begs the question against the view that legal systems are necessarily coercive because Raz (and others) 'offe[r] no defense of the claim that the relevant system is properly characterized as law according to our conceptual practices'.[34] Our study shows that Raz's appeal to the society of angels does find some support in, and is compatible with, our conceptual practices.

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[33] A non-parametric test that considers the fact that the data was not normally distributed also indicates the same conclusion (Wilcoxon signed-rank test, $V = 2798$, $p < 0.001$).

[34] Himma (n 2) 238.

Second, and relatedly, even if the support for the existence of a non-coercive legal system is moderate, as it were, this should still be considered a positive result for Raz's side of the debate. After all, if the intuition that legal systems are necessarily coercive was as strong and widespread as critics suggest, we should not have observed a moderate support *for* Hartian–Razian intuitions. Rather, we should have observed a *strong support* for the idea that there is no legal system in the society of angels. Yet, most of those who disagreed that there was a legal system in the society of angels did so without certainty, choosing the alternatives 'Somewhat disagree (3)' and 'Disagree (2)' (30.61%) instead of the more decisive 'Strongly disagree (1)' (4.08%).

Finally, it may be argued that the fact that the intuitions about the society of angels varied somewhat may hint that the society of angels thought experiment is a *borderline case* of a legal system. And as we do with borderline cases, it is 'best to admit their problematic credentials, to enumerate their similarities and dissimilarities to the typical cases, and leave it at that'.[35] However, even if we concede that the angelic system is a borderline case of a legal system, our findings about the thought experiment are still important. After all, before Hart and Raz, 'Every major philosopher who has theorized about the … nature of law since the 1600s h[eld] the view that law consists, in part, of mandatory norms backed by coercive sanctions'.[36] If a non-coercive system that lacks coerciveness is a borderline case, this should at least weaken our confidence in the claim that coerciveness is a necessary feature of legal systems.

Now, the fact that an expressive minority of participants either did not classify or displayed some reluctance in classifying the angelic system as a legal system may provide some further ammunition to those who have raised methodological doubts about the relevance of scenarios like the society of angels to the philosophical discussion. After all, the variation in people's views may be an indication that we should not read too much into this thought experiment if we want to learn about *our* legal systems (and our corresponding concept). Some philosophers have indeed made similar points and have not only challenged the methodological soundness of the society of angels thought experiment, but also claimed that conclusions extracted from it would be uninteresting even if reliable. For them what matters are people's intuitions about the coerciveness of *our* legal systems, not about legal systems for angels.[37] For this reason, we designed a new study.

4. *Our Systems*

For this study, we assumed that the coerciveness of a system could be understood in terms of a relation between three variables: the presence of sanctions, the presence of enforcement and compliance.[38] For simplicity, we also assumed

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[35] Raz, *Practical Reason and Norms* (n 1) 150.
[36] Himma (n 2) 231.
[37] Tamanaha (n 2); Schauer (n 3).
[38] For a recent discussion on the role of these variables in an account of the coerciveness of legal systems, see Lucas Miotto, 'What Makes Law Coercive When It Is Coercive' (2021) 107 ARSP 235.

that the presence of sanctions was the strongest indicator of coerciveness; compliance was the weakest.[39] Given these assumptions, we designed eight vignettes of human societies, one for each possible combination of these variables. The vignette describing a system that exhibits all three variables should be viewed as the most coercive of them all; the one describing a system lacking the three variables should be viewed as non-coercive.

We made a prediction *against* the view that legal systems *must* be coercive in human societies: that people would tend to acknowledge the possibility of a non-coercive *human* scenario just as much as they accepted the possibility of a non-coercive *angelic* scenario. More specifically, we predicted that the presence of sanctions would turn out to be less important for judgments about whether the human system counts as legal than any of the other two factors.[40]

A. Method

A total of 612 participants were recruited through Prolific.co and completed our questionnaire on Qualtrics. Of these, 273 participants were excluded for failing the pre-registered attention checks, leaving a final sample of 339 participants (mean age = 26.95 years, 131 females, 5 non-binaries).

Each participant received one vignette describing a human society presenting a combination of the crossed factors (sanctions/enforcement/compliance). As in Study 1, participants were asked about their agreement with the statement that 'The society described in the scenario above has a legal system'.

In all conditions, participants read about a hypothetical society that employed a system of rules:

> Imagine a country governed by a series of rules designed by a certain group of elected individuals. The country's rules regulate several aspects of the inhabitant's public and private lives. For example, they describe how the country is politically organized, they detail the duties that authorities have towards individuals and the duties that individuals have towards each other. These rules also regulate traffic, communications (radio, tv, telephone, emergency channels, etc), healthcare, the contracts individuals make to buy or sell goods, exchange services, transfer or acquire property, among other things.

Then, participants received a more detailed description of a specific system of rules that showed some combination of the three factors. For instance, in the condition where all factors were present, the vignette continued as follows:

> This country also has rules describing the penalties applicable to rule-breakers and a group of authorities who are entitled to adjudicate disputes and decide if an alleged rule-breaker merits a penalty or not. The vast majority of inhabitants know that this

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[39] Strictly speaking, compliance is *not* by itself an indication of coerciveness. However, it is an indication that a system's mandates *might* be making an impact on citizen's practical deliberation, which is a necessary condition of coerciveness according to some philosophical accounts. See eg Robert Nozick, 'Coercion' in S Morgenbesser, P Suppes and M White (ed), *Philosophy, Science, and Method: Essays in Honor of Ernest Nagel* (St Martin's Press 1969).

[40] <https://aspredicted.org/blind.php?x=pr49gi>.

country also has individuals who are tasked with ensuring both the existing rules and the authorities' decisions are complied with. Most of the time, the inhabitants of this country comply with the rules.

Compare that with the condition where only enforcement and compliance were present:

This country does not have rules describing the applicable penalties to rule-breakers, but it does have a group of authorities who are entitled to adjudicate disputes. These authorities can declare that someone has broken a rule or wronged another individual, but they can never apply a penalty, since the rules do not establish any. The vast majority of inhabitants know that this country also has individuals who are tasked with ensuring both the existing rules and the authorities' decisions are complied with. Most of the time, the inhabitants of this country comply with the rules.[41]

B. Results

As pre-registered, we created a linear model of participants' intuitions about the existence of legal systems using the variables encoding the presence or absence of sanctions, enforcement and compliance as independent variables, with age and gender added as covariates for control.[42] We then ran an analysis of covariance (ANCOVA) based on this model. We found that all three factors contributed significantly to judgments about the legal status of the systems described in the vignettes. However, contrary to our hypothesis, the presence of sanctions was by far the best predictor of those judgments ($F_{(1, 290)} = 71.15$, $p < 0.001$, $\eta_p^2 = 0.23$), followed by enforcement ($F_{(1, 290)} = 27.69$, $p < 0.001$, $\eta_p^2 = 0.08$) and compliance ($F_{(1, 290)} = 10.43$, $p = 0.001$, $\eta_p^2 = 0.03$). No other effect was significant (all $p > 0.06$, all $\eta_p^2 < 0.001$). The results are illustrated by the descriptive statistics shown in Figure 2.

C. Discussion

Study 2 is in stark contrast to Study 1. When asked to judge hypothetical human societies, laypeople rely heavily on the presence of sanctions to classify an institution as a legal system. Our prediction was not empirically vindicated: our findings do provide some initial support for the view that coercion is conceptually necessary to human legal systems. That is good news for those—like Frederick Schauer and Kenneth Himma—who hold that the presence of sanctions and

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[41] As with Study 1, the data collection followed two stages. Due to a typographical mistake in the first stage of data collection for Study 2, the sentence indicating the presence or absence of compliance (the last sentence in the quoted paragraph) made reference to *legal* rules. This could conceivably have inflated judgments of legality across all experimental conditions. The second stage omitted the epithet to mention compliance with rules *simpliciter*. As noted in note 23, exploratory models (see Supplementary Materials n 30) did not detect any significant differences between the two data collection stages with regard to the effects that interest us. Hence, the results presented in this section pool together data from both stages, ignoring the slight difference in phrasing.
[42] The full model is specified in the Supplementary Materials (n 30). Our results are robust to the exclusion of the covariates.
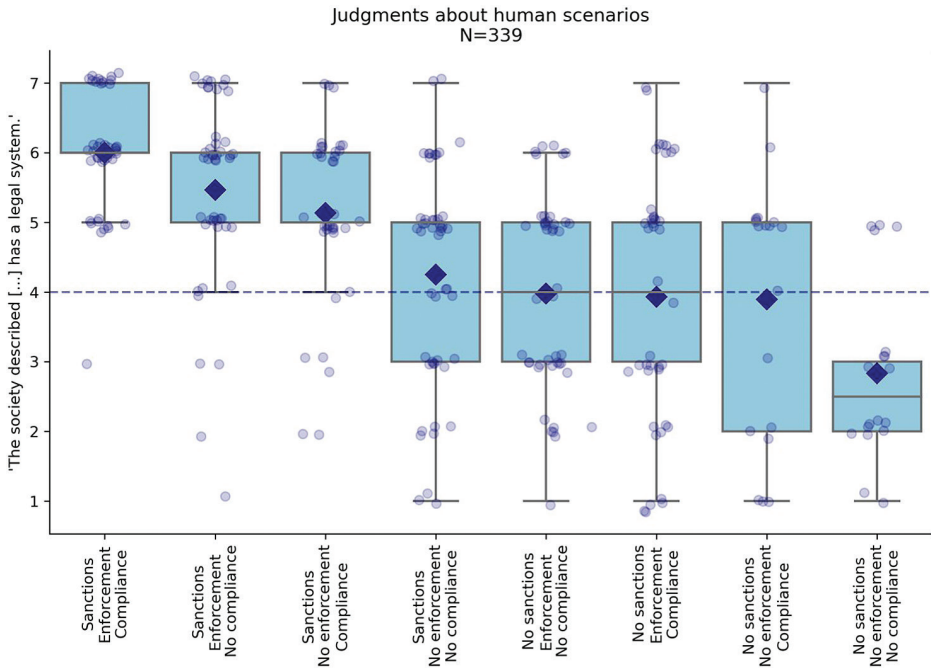
Figure 2. The presence of sanctions was the most important predictor in people's evaluation of whether a human system of rules counted as legal. Mean judgments of legality (represented by the dark blue diamond inside the box) were above the midpoint for all vignettes where sanctions were present.

enforcement play an indispensable role in an account of legal systems that exist in human societies.

We should note, however, that our prediction was unorthodox. The view according to which coercion (in the form of sanctions and enforcement) plays a central role in human legal systems is widely accepted by contemporary legal philosophers. Hart and Raz themselves recognise that a non-coercive legal system is *humanly* impossible.[43] As Hart puts it, if legal systems are to 'serve the minimum purposes of beings constituted as men are', then coercion must be seen as a 'natural necessity'.[44] Despite being aware of this, and given that we conducted Study 2 after receiving the results of Study 1, we assumed as a working hypothesis that participants' intuitions would be stable across angelic and human scenarios. But this was not the case.

Perhaps the simplest explanation of our findings from Study 2 is that people are sensitive to the fact that legal systems must display some specific features

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[43] Raz, *Practical Reason and Norms* (n 1) 158.
[44] Hart, *The Concept of Law* (n 7) 199.

in specific contexts in order to subsist and fulfil its functions.[45] And because, like most legal philosophers, people *might* believe that legal systems would not work properly without coercion in human scenarios like those described in the vignettes (ie they might believe that coercion is a natural or pragmatic necessity in human legal systems), they tend to reject the possibility of non-coercive legal systems in such scenarios. This explanation, however, must be taken with a caveat. It assumes that people believe (rightly or wrongly) that legal systems would not work properly without coercion in the scenarios described in the vignettes.[46] But this assumption has not been explicitly tested. To strengthen our explanation, further testing would be necessary.

Now, despite this explanation of the results of Study 2—an explanation that would be shared by most legal philosophers—we must not be too quick to conclude, based on our study alone, that a non-coercive *human* legal system is conceptually impossible. The reason for this is that our study did not present participants with scenarios where it would be *plausible* to believe that humans would comply with the system's mandates in the absence of sanctions. As formulated, the vignettes gave participants no reason or details that could help in mitigating the (perhaps widely shared) assumption that the described systems would stop working properly without coercion. But it is still open for investigation how people would react to detailed scenarios where a non-coercive institution is responsible for organising the social lives of human beings (eg a scenario where a catastrophic event disables coercive enforcement mechanisms while increasing social solidarity or patriotism).[47] Only after testing such scenarios we would be able to conclusively determine if our conceptual practices do indeed favour the view that *human* legal systems are necessarily coercive. We will return to this point later in the article (section 6) in discussing the results of Study 5, which considered precisely this kind of scenario. But first we will consider an alternative explanation of our findings from Studies 1 and 2.

5. *Angels, Demons and Moral Judgments*

Recent experimental research has shown that judgments about the concept of law are shaped by moral evaluation. People tend to deny that immoral statutes, such as provisions banning interracial marriage, are law even in a superficial sense. In contrast, morally permissible statutes (eg a provision banning flammable children's nightclothes) are seen as law in both superficial and deep senses.[48]

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[45] ibid.

[46] Whether, in fact, human legal systems depend on coercion to properly work is a separate question, one we do not discuss in this article. For a discussion of this (factual) claim, see Lucas Miotto, 'The Good, the Bad, and the Puzzled: Coercion and Compliance' in Jorge Luis Fabra-Zamora and Gonzalo Villa Rosas (eds), *Conceptual Jurisprudence: Methodological Issues, Classical Questions and New Approaches* (Springer International Publishing 2021). We thank one of the reviewers for pressing us on this point.

[47] For an example of such a human scenario, see section 6E below. For further discussion, see Miotto, 'From Angels to Humans' (n 20).

[48] Brian Flanagan and Ivar R Hannikainen, 'The Folk Concept of Law: Law Is Intrinsically Moral' (2022) 100 *Australasian Journal of Philosophy* 165.

This suggests an alternative explanation for the discrepancy between the results of Studies 1 and 2. Perhaps most participants characterised the non-coercive system regulating the lives of angels as a legal system mainly because they were told that the angels were *morally perfect*. By being so told, people applied the concept of law in a normatively loaded way, a way that departs from how analytical jurisprudence typically presupposes the concept is applied. In contrast, our vignettes describing human societies did not include any information about the character of humans inhabiting those societies, and thus did not invite participants to adopt a morally loaded reading of law. Now, if the moral character of the individuals described in the vignettes affects how people evaluate the possibility of non-coercive legal systems, then scenarios like the society of angels might unduly stack the deck in favour of the Hartian–Razian side of the debate.

To test this alternative explanation, we conducted a two-part study (3A) and (3B). In both parts, participants were shown a vignette describing a society indistinguishable from the society of angels in terms of sanctions, enforcement and compliance. The only difference was that instead of morally perfect angels, this society was composed of morally evil demons.

A. Study 3A: Angels and Demons (Generic)

The first part of the study contrasted the society of angels vignette with a *generic* description of a society of demons; one that did not provide examples that corroborate the idea that the demons were morally evil. The vignette read as follows:

> Imagine a society of evil demons who cooperate with each other to spread their wicked influence. Despite being evil and cooperative, the demons still make use of a series of interrelated rules to organise numerous aspects of their society: the form of their government, the distribution of tasks and services, traffic, taxation, among other things. This society also employs a small group of demons to resolve potential misunderstandings or disputes about the existing rules. Nonetheless, because the demons are cooperative there are neither rules prescribing punitive measures for breaking the rules, nor are there individuals tasked to ensure compliance with the rules.

The idea here is that if the influence of moral judgments accounts for the difference between Studies 1 and 2, we should expect judgments about the possibility of non-coercive legal systems in societies of morally good individuals (eg angels) to be radically different from judgments about scenarios that depict morally wicked individuals (eg demons).

B. Method

A total of 365 participants were recruited through Prolific.co and completed our questionnaire on Qualtrics. Of these, 58 participants were excluded for failing the pre-registered attention checks, leaving a final sample of 307 participants (mean age = 26.73 years, 193 females, 2 non-binaries; 294 participants reported no formal training in law).

Each participant read either the society of angels or the society of demons vignette and had to judge whether 'The society described in the scenario above has a legal system'.[49] We thought that similar effects to the ones observed in recent empirical studies about the influence of moral judgments in our law-related conceptual practices would be present here. For that reason, we hypothesised that participants' beliefs about the moral character of the subjects in a society would influence their judgments about whether a non-coercive system was a legal system.[50]

C. Results

As depicted in Figure 3, our pre-registered one-tailed Welch two-sample t-test failed to find any statistically significant differences between participants willingness to classify the society of angels ($M = 4.32$) and the society of demons ($M = 4.12$) as legal systems ($t(297.98) = 1.09$, $p = 0.139$, $d = 0.12$).[51]

D. Discussion

The small and statistically insignificant difference between the judgments about the society of angels and society of demons vignettes casts doubt on the hypothesis that moral judgments explained the differences between Studies 1 and 2. It
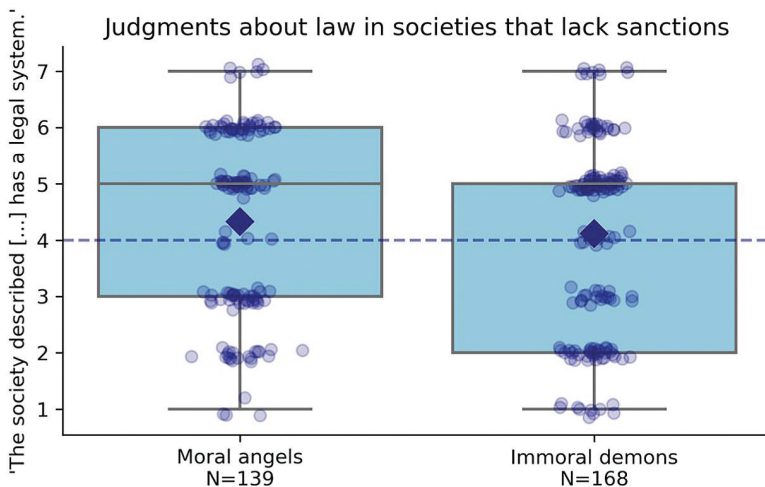
Figure 3. There was no statistically significant difference between the societies of angels and demons.

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[49] There was also a third condition, describing a society of demons that lacked compliance but had sanctions and enforcement. The condition was included to test hypotheses unrelated to the ones we consider in this article. Data and stimuli for the condition are also available in the Supplementary Materials (n 30).

[50] Pre-registered (as H1) in <https://aspredicted.org/blind.php?x=sj4p73>.

[51] A non-parametric alternative (a Wilcoxon rank-sum test) indicated the same result ($W = 12691$, $p = 0.089$).

also reduces the plausibility of the more general hypothesis that intuitions about the society of angels are intuitions about a normatively loaded reading of the concept of law.

One worry with Study 3A is that the vignettes might lack important details. Despite mentioning that angels are good and that demons are evil, the vignettes do not provide concrete examples that illustrate angels' and demons' moral character. The lack of such details might make the vignettes less credible and dampen an existing effect of morality.[52]

E. Study 3B: Angels and Demons (Specific)

To allay the concerns just mentioned, we created a new pair of vignettes containing specific examples that illustrate the moral character of angels and demons. The differences between the two vignettes (society of angels/society of demons) are in brackets:

> Imagine a society of [angels/demons] governed by a class of [morally perfect Archangels/evil Overlords]. The [Archangels/Overlords] make use of a series of inter-related rules to better govern their subjects and spread their [good/wicked] influence. The rules determine the duties subjects owe to [the Archangels/their Overlords], how tasks and services are distributed among [angels/demons], and how much taxes subjects must pay to live under the protection of [the Archangels/their Overlords]. The rules also organise other aspects of the society of [angels/demons], such as traffic, communication, health, among many other things. [Angels/Demons] love to go from [Heaven/Hell] to Earth to procure their [good/evil] ways. Most [angels/demons] are especially fond of going to Earth in order to [help/torture] babies and puppies in [caring/sadistic] fashion. However, if all [angels/demons] were allowed to have their way, the society of [angels/demons] would not be able to live out the true meaning of its creed: all living creatures must be [helped/tortured] equally. So that some creatures are not forgotten and left out from [care/torture], the [Archangels/Overlords] have devised rules assigning [helping/torturing] duties to [angels/demons] that will guarantee that all types of living creatures are accounted for. This society also has a group of [Archangels/Overlords] responsible for resolving potential misunderstandings or disputes about the existing rules. Nonetheless, because subjects are extremely loyal to their [morally perfect Archangels/evil Overlords], the [Archangels/Overlords] neither make use of enforcers to ensure that subjects comply with the rules, nor impose punitive measures for breaking the rules.

F. Method

A total of 373 participants were recruited through Prolific.co and completed our questionnaire on Qualtrics. Of these, 74 participants were excluded for failing the pre-registered attention checks, leaving a final sample of 299 participants (mean

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[52] We thank Brian Flanagan and Ricardo Lins Horta for pressing us on this point.

age = 27.37, 162 female, 5 non-binaries; 278 participants reported no formal training in law).

Each participant read either the specific version of the society of angels or the society of demons vignette and had to judge whether 'The society described in the scenario above has a legal system'. As in Study 3A, we hypothesised that participants' beliefs about the moral character of the subjects in a society would influence their judgments about whether the society's system of rules was a legal system.[53]

G. Results

As depicted in Figure 4, the pre-registered one-tailed Welch two-sample *t*-test found a small, but statistically significant, difference between legality ratings for a society of morally perfect angels (*M* = 4.99) and evil demons (*M* = 4.67) (*t*(294.5) = 1.74, *p* = 0.041, *d* = 0.20).[54] Next, we ran exploratory tests to assess whether each of the two conditions differed significantly from the midpoint. The exploratory tests revealed that ratings in both conditions were significantly higher than the midpoint.[55] In other words, both the society of morally good angels and the society of morally evil demons were seen as having a legal system.
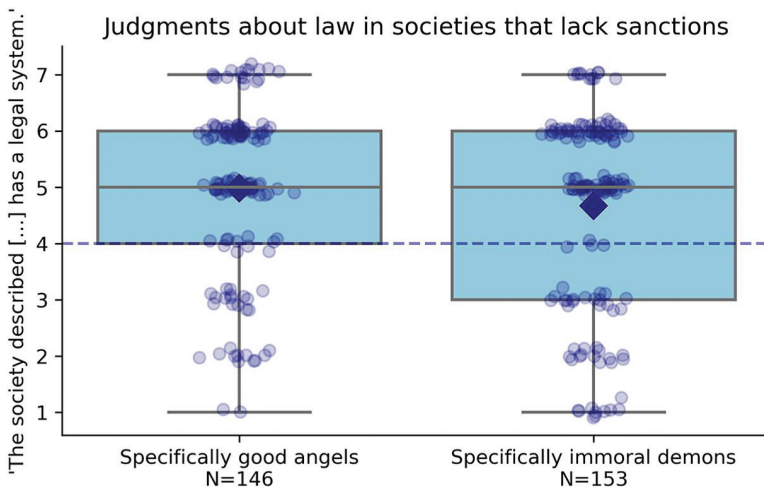
Figure 4. Participants were more likely to agree that the society described had a legal system when it was inhabited by morally good angels than by immoral demons. However, the difference was small.

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[53] Pre-registered in <https://aspredicted.org/blind.php?x=/9M4_R8J>.
[54] The non-parametric alternative (a Wilcoxon rank-sum test), however, failed to reach the level of significance (*W* = 12146, *p* = 0.088).
[55] For parametric and non-parametric tests, all *p* < 0.001. See Supplementary Materials (n 30).

H. Discussion

According to our studies, judgments about the possibility of non-coercive legal systems are stable with regard to the moral character of individuals, even when the vignettes mention specific examples of good or evil deeds and goals. Though the difference between the conditions in Study 3B was statistically significant, participants clearly favoured the view that a legal system is present in both scenarios, a finding that gives extra support for the view that a non-coercive legal system is conceptually possible.[56] Given what we found from Study 3, the best explanation for why judgments about the society of angels (Study 1) and the society of humans (Study 2) differ continues to be that judgments about the possibility of non-coercive legal systems track people's beliefs about a society's pragmatic need of coercion to ensure cooperation.[57] Regardless of the moral character of individuals, the more a given society is deemed to need coercion to ensure the minimum efficacy of a legal system, the less likely people are to accept the possibility of a non-coercive legal system in that society.

This explanation—and our findings so far—may lead one to think that judgments about coercion being necessary change when *humans* are added to the equation and that this is so because people indeed seem to share the view that a non-coercive human legal system is conceptually (and naturally/pragmatically) impossible. In fact, the findings so far reported seem to somewhat echo Raz's claim that a non-coercive legal system is 'humanly impossible, but logically possible'.[58] In the next sections, we put this to further testing.

6. Abstract versus Concrete

A recent finding in experimental jurisprudence showed that people think differently about legal cases when they are described in more concrete or abstract terms. For instance, most participants in a study reported that they would apply a legally mandated admissions requirement in the abstract, but most also indicated that they would end up waiving the requirement in concrete cases.[59] Could the same sort of quasi-paradoxical discrepancy influence judgments about the coerciveness of legal systems?

Strikingly, philosophers on each side of the discussion on the coerciveness of legal systems have employed different strategies to support their views. While those who afford coercion a less important role often focus on concrete (though fictitious) thought experiments such as the society of angels, torchbearers of the necessity or centrality of coercion tend to use a more diffused and arguably

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[56] As a side note, our findings also show that participants' intuitions do not side with strong natural law theories. After all, most participants believe that even evil systems (systems that institutionalise the torture of babies and puppies by evil demons) are legal systems.

[57] See, eg Hart, *The Concept of Law* (n 7) 199.

[58] Raz, *Practical Reason and Norms* (n 1) 158.

[59] See, Noel Struchiner, Guilherme da FCF de Almeida and Ivar R Hannikainen, 'Legal Decision-Making and the Abstract/Concrete Paradox' (2020) 205 Cognition 104421.

abstract strategy, referencing dictionary definitions[60] or general patterns and trends of legal regulation.[61] The hypothesis here is that, like philosophers, ordinary people are perhaps more willing to support the necessity of coercion *in abstract* than *in concrete*.[62] The contrast between Studies 3A and 3B already lend some support for this hypothesis: participants were overall more likely to report that a legal system existed in the more concretely described societies of Study 3B than in the more abstractly described societies of Study 3A. And this effect was observed regardless of whether the system in question was the angelic or demonic one.[63] In Study 4, we further investigated this effect.

A. *Study 4: Abstract versus Concrete*

To test our abstract/concrete hypothesis, we analysed abstract questions included in the surveys for Studies 1 and 2, probing participants to report whether: (a) they thought that a society comprised of non-humans could have a legal system (Study 1); and (b) they thought that each of the three elements (sanction, enforcement and compliance) was necessary for an institution to count as a legal system (Studies 1 and 2). We then compared the answers to these abstract questions with the answers participants gave to the concrete vignettes in each study.

B. *Method*

Participants were the same as in Studies 1 and 2. Abstract and concrete questions were shown to participants in a random order. Regarding question (a), we pre-registered the hypothesis that there would be no difference between abstract and concrete judgments, ie that people tend to accept the possibility of a non-human legal system to the same degree in both concrete and abstract. Concerning question (b), we had pre-registered that the support for the necessity of sanctions and enforcement to legal systems would be higher in abstract than in concrete scenarios.[64]

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[60] Himma (n 2) ch 3.

[61] Schauer (n 3).

[62] Note that a description or question can be said to be more 'concrete' or 'abstract' based on different parameters. For our purposes, we regard specificity and level of detail as the relevant parameters for concreteness/abstractness. Thus, a question about a detailed thought experiment that describes specific features of an institution is regarded as *more* concrete than a general question about an unspecified institution (eg 'Is coercion central to legal systems?').

[63] To test this, we joined the datasets from Studies 3A and 3B, encoding the study as 'level of abstraction'. We then ran an analysis of variance (ANOVA) of the dependent variable with level of abstraction and society type (angels versus demons), as well as the interaction between the two as independent variables. This revealed statistically significant main effects of level of abstraction ($F_{(1, 602)} = 20.82$, $p < 0.001$) and society type ($F_{(1, 602)} = 3.92$, $p = 0.048$), but no significant interaction between them ($F_{(1, 602)} = 0.50$, $p = 0.664$). Collapsing across society types, a Welch two-sample *t*-test confirmed the significance of the difference between abstract ($M = 4.21$) and concrete ($M = 4.82$) judgments ($t(603.98) = 4.63$, $p < 0.001$, $d = 0.38$). A Wilcox rank-sum test indicates the same conclusion ($W = 56086$, $p < 0.001$).

[64] These were, respectively, H2 in the pre-registration form for Study 1 <https://aspredicted.org/blind.php?x=z8nq59> and H3 in the pre-registration form for Study 2 <https://aspredicted.org/blind.php?x=pr49gi>.

C. Results

In Study 1, abstract statements recorded participants' agreement with the following statement: 'A society has a legal system only if it is a society inhabited by human beings.' To make abstract ratings comparable with their concrete counterparts (ie ratings about the society of angels vignette), we reverse coded the responses; after all, disagreeing with that statement meant that a society inhabited by angels (non-humans) could, in principle, have a legal system. In contrast, agreeing with the statement meant that societies inhabited by angels did not have legal systems.

A paired t-test between the two measures demonstrated the significance of the difference between abstract ($M = 3.86$) and concrete ($M = 4.44$) agreement with the idea that there could be law in a society of angels ($t(97) = 2.24$, $p = 0.027$, mean of the differences = 0.58, $d = 0.33$).[65] This difference is visually represented in Figure 5A. An ANOVA including the main effects of question order and abstraction level, the interaction between the two, as well as random effects of participant revealed a main effect of abstraction level ($F_{(1, 192)} = 5.27$, $p = 0.02$) and no other significant effect (all $p > 0.1$).[66] Thus, contrary to our prediction, participants were more likely to agree that non-humans could have legal systems when the question was posed concretely.

Next, we analysed data from Study 2. Recall that Study 2 investigated the necessity of coercion in human societies. The study's design presupposed that the coerciveness of legal systems could be understood as a compound of three variables: the presence of sanctions, enforcement and compliance. Participants were then presented with a vignette describing a possible combination of these variables. In addition to the concrete scenario described in the vignettes, we also
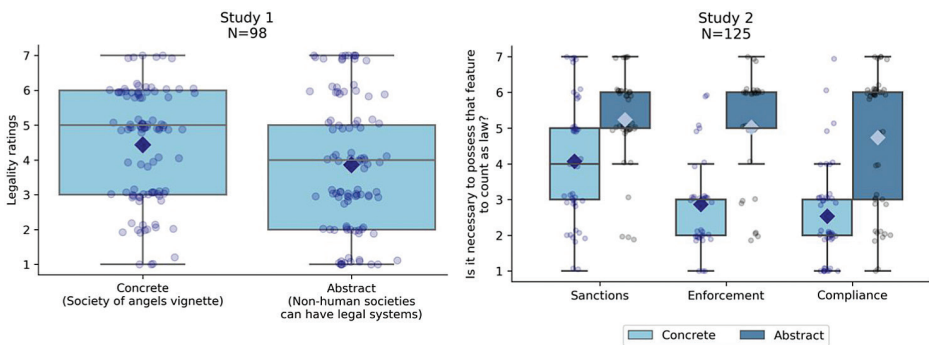
Figure 5. A (left side): Agreement that non-humans can have a legal system was higher in concrete than in abstract. Figure 5B (right side): Abstract judgments about the importance of all three features were systematically higher than their concrete counterparts.

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[65] The same results are indicated by a Wilcoxon rank-sum test ($W = 5667$, $p = 0.027$).
[66] See Supplementary Materials (n 30).

asked every participant to answer an abstract question regarding each variable; ie a question about the necessity of sanctions, enforcement and compliance for the existence of a legal system.

To test whether abstract and concrete framing influenced participants' perception of the necessity of the relevant variables (sanction, enforcement, compliance), we reverse coded concrete answers to cases where one of the variables was absent but all the other variables were present. We then contrasted those answers with the responses given by the same participant to the relevant abstract question. For instance: if a participant in the condition where sanctions were absent, but both enforcement and compliance were present, agreed that the society had a legal system, this meant that the participant *disagreed* in concrete with the idea that sanctions are a necessary feature of legal systems. This resulted in a dataset with the 125 participants who were assigned to one of the three conditions appropriate to test necessity ratings in concrete. We then performed an ANCOVA of necessity ratings with abstraction level, dimension (sanctions, enforcement, compliance), presentation order and all two- and three-way interactions as independent variables, while accounting for random effects of participant. This analysis showed a significant and large main effect of abstraction level ($F_{(1, 119)} = 126.28$, $p < 0.001$). It also revealed significant main effects of dimension ($F_{(2, 119)} = 7.80$, $p < 0.001$). Finally, we also detected a two-way interaction between abstraction level and dimension ($F_{(2, 119)} = 4.45$, $p = 0.014$). None of the other effects reached statistical significance (all $p > 0.21$).

A simple analysis of the distribution of responses per condition, as represented in Figure 5B, revealed that the significant differences were in the predicted direction with regard to sanctions and enforcement: in both cases, agreement was higher in abstract than in concrete (in fact, judgments about the necessity of enforcement fell below the midpoint in concrete). Compliance also followed this pattern, though this result was not anticipated.

D. Discussion

Study 4 suggests that the so-called 'abstract/concrete paradox' influences intuitions about the coerciveness of legal systems. Recall that there is plenty of anecdotal evidence favouring the idea that laypeople believe that legal systems are necessarily coercive. If our findings are correct, the existence of such anecdotal evidence might be (at least partly) explained by framing effects. Most people are usually not exposed to concrete situations where they are required to test their intuitions regarding the coerciveness of legal systems. After all, most people are only acquainted with actual legal systems that simultaneously possess sanctions, enforcement mechanisms and a moderately high level of compliance. Thus, most have a very broad acquaintance with the application conditions of their own shared concept of legal system. If asked an abstract question about the role of coerciveness in a legal system, there might be a natural inclination to stick to the more familiar examples of legal systems (which is why we would give a coercion-based explanation of law to a five-year-old). However, when asked

about a concrete and less familiar case—like the society of angels or the society of demons—people are forced to closely examine and reflect upon the content and the application conditions of their concept of legal systems. And, as it turns out, upon reflection, most people tend to include the systems described in scenarios such as the societies of angels and demons within the extension of their concept of legal system.

Note that the explanation we are hinting at is not unlike what many cognitive psychologists and linguists think usually happens when we ask people to think of examples of birds, mammals and wines. Most people would not give penguin, platypus and plum wine as examples of these. That is because, according to what is known as the 'prototype theory' of concepts, people tend to pick examples that best represent the concept—and those are usually the ones with which people are more familiar. But upon reflection, and with additional evidence, people can come to recognise unfamiliar cases as genuine examples of concepts that they adopt.[67]

This has an implication to recent philosophical discussion about the coerciveness of legal systems. If the evidence about people's conceptual practices mustered by philosophers who defend the necessity or centrality of coercion—like Himma and Schauer, respectively[68]—are primarily based on *abstract* considerations, then they might not be good or fine-grained enough to support their views against objections like the society of angels. After all, generic intuitions about the coerciveness of legal systems are insensitive to (or indeterminate on) a diversified pallet of specific applications of the concept. When people think about legal systems, they might not immediately think about a society of angels, saints or demons, or Cook Island.[69] But when people are asked about a system in a society of angels or demons, they reflect on their shared concept of legal systems and tend to extend this concept to such unfamiliar scenarios. That way, we could say that the intuitions we gather from thought experiments like the society of angels and its variations are intuitions about a reflected concept of legal system and as such may be *more* valuable to our understanding of the contours of our conceptual practices, as they may help in giving the variety we need to avoid 'nourishing our thinking with one kind of example'.[70] All this suggests that attempts to downplay the importance of fanciful thought experiments because they are (supposedly) disconnected from reality might be detrimental to our understanding of our conceptual practices.

Now, one prediction that stems from our findings about the abstract/concrete framing is that participants might exhibit different intuitions about non-coercive

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[67] See Eleanor Rosch, 'Principles of Categorization' in Eleanor Rosch and Barbara Lloyd (eds), *Cognition and Categorization* (Lawrence Erlbaum 1978); James Hampton, 'Testing the Prototype Theory of Concepts' (1995) 34 Journal of Memory and Language 686.

[68] In fairness, it should be noted that Schauer's defence of the centrality of coercion to human legal systems is less dependent on folk intuitions than Himma's, for example. Schauer's defence also rests on several findings from social sciences about people's disposition to comply with the law. To that effect, see Schauer (n 3) chs 5 and 6.

[69] Shapiro (n 1).

[70] Ludwig Wittgenstein, *Philosophical Investigations* (GEM Anscombe tr, 3rd edn, Macmillan 1958) para 593.

human institutions if presented with scenarios that are more concrete than the ones used in Study 2. As mentioned earlier, in Study 2 we did not present participants with scenarios where it would be easy to believe that humans would comply with the system's mandates in the absence of sanctions or enforcement mechanisms. To test this prediction, the challenge was to come up with detailed (and hence more concrete) scenarios of that sort. This is what we did in Study 5.

E. Study 5: Increasing Concreteness

To test if participants would classify non-coercive systems governing human beings as legal systems, we designed two different scenarios. The first scenario described a society that had an immediate breakdown of law enforcement after falling victim to a terrorist attack. However, the increased solidarity instilled by the attack urges people to continue complying with the rules.[71] The vignette read as follows:

> Imagine a society of humans, much like ours. Now suppose that all local means of enforcement—police, army, and any potential replacements—are temporarily disarmed and disabled by a terrorist attack. This condition continues for several years. Crime rates increase, compliance with the rules decreases, but society does not dissolve at a stroke into a war of all against all. Citizens generally feel a sense of solidarity in the wake of the attack, and a desire to maintain public order and decency despite the private advantages they could gain through disobedience and noncompliance; this sense of solidarity is common knowledge and sufficient to provide assurance that people will generally continue to comply with the existing rules. The rules still earn most people's respect: the state continues to provide the services it always has; the legislature meets regularly; rules are debated and passed; contracts and wills drawn up; property transferred in accordance with the rules; disputes settled through mediators, and so on.

Our second scenario borrowed from Study 3A's vignettes (angels and demons). The main difference between the scenarios was that, instead of speaking of angels and archangels, the new vignette spoke of peace-loving hippies and gurus. The vignette received the following formulation:

> Imagine a large human society of peace-loving hippies governed by a class of peace-loving Gurus. The Gurus make use of a series of interrelated rules to better govern the society and spread their love and peaceful influence. The rules determine the duties hippies owe to the Gurus, how tasks and services are distributed among the members of the society, and how much taxes hippies must pay to live under the government of the Gurus. The rules also organise other aspects of the society, such as traffic, communication, health, among many other things. Nonetheless, because hippies are peace-loving there are neither rules prescribing punitive measures for breaking the rules, nor are there individuals tasked to ensure compliance with the rules. Most of the hippies comply with the rules most of the time.

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[71] This vignette was adapted from Andrea Sangiovanni, 'Global Justice, Reciprocity, and the State' (2007) 35 Philosophy & Public Affairs 3, 11. For further discussion, see Miotto, 'From Angels to Humans' (n 20).

We hypothesised that at least one of these scenarios would be seen by participants as having a legal system.[72]

F. Methods

A total of 101 participants were recruited through Prolific.co and they completed our questionnaire on Qualtrics. Of these, four participants were excluded for failing a simple pre-registered attention check, leaving a final sample of 97 participants (mean age = 24.92, 48 female, 1 non-binary; 86 reported no formal training in law).

Each participant read only one out of the two vignettes, rating their agreement on a seven-point Likert scale with the statement that 'The society described in the scenario above has a legal system'. Next, participants answered the attention check ('What is ten minus two?'), followed by a block of questions that included a manipulation check ('How much do you agree with the following statement? "Citizens in the society described earlier usually follow the rules"') and two exploratory questions, about credibility ('How credible is the scenario you read earlier?') and conceivability ('How difficult is it to imagine a society like the one described earlier?'). Responses to questions on the second block were recorded using a five-point Likert scale. The order of questions within this block was also randomised. Finally, participants answered demographic questions.

G. Results

First, we needed to be sure that participants believed that the members of the societies described in the vignettes usually complied with their system's rules. That was indeed the case: as shown in Figure 6, mean ratings for both the 'Hippies' and 'Terrorism' scenarios fell significantly above the midpoint of 3 ($M_{Hippies}$ = 3.78, $t(49) = 5.92$, $p < 0.001$, $d = 0.84$; $M_{Terrorism} = 3.42$, $t(46) = 3.07$, $p = 0.002$, $d = 0.45$). Next, we turned to the pre-registered tests. The first of these revealed that judgments for the 'Hippies' scenario were above the midpoint of 4, but not significantly so ($M = 4.06$, $t(49) = 0.24$, $p = 0.405$, $d = 0.034$).[73] On the other hand, as predicted, mean agreement with the statement that the 'Terrorism' society had a legal system fell significantly above the midpoint of 4 ($M = 4.74$, $t(46) = 3.17$, $p = 0.001$, $d = 0.46$).[74]

An exploratory analysis has shown that ratings about conceivability were significantly higher for the 'Terrorism' scenario ($M = 2.68$) when compared with the 'Hippies' scenario ($M = 2.16$, $t(88) = 2.42$, $p = 0.017$, $d = 0.50$).[75] This indicates that part of the difference between these two scenarios with regard to the main question may be explained by the reduced conceivability of the 'Hippies' scenario.[76]

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[72] <https://aspredicted.org/sb489.pdf>.
[73] The non-parametric alternative gives the same results: $V = 513$, $p = 0.42$.
[74] The non-parametric alternative test is also significant: $V = 670$, $p = 0.003$.
[75] The non-parametric alternative is also significant: $V = 871$, $p = 0.015$.
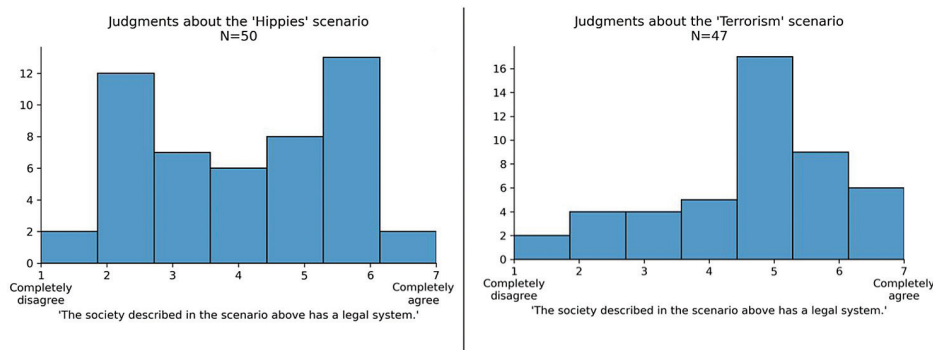
Figure 6. Judgments about the existence of a legal system fell highly above the midpoint in the 'Terrorist' scenario.

H. Discussion

Study 5 confirmed our general prediction from our findings about the abstract/concrete framing: participants indeed exhibit different intuitions about non-coercive *human* institutions when presented with scenarios that are more concrete than the ones used in Study 2. The findings of Study 5, however, not only show that folk intuitions about the coerciveness of law are sensitive to framing effects; they also reveal something of major importance for law and coercion debates, namely that folk intuitions support the existence of non-coercive legal systems in *human* scenarios—at least when a more conceivable and detailed story about the system is told.[77] We could say, therefore, that the findings of Study 5 provide some support for the (conceptual or metaphysical) possibility of non-coercive *human* legal systems. In so doing, they cast some doubts not only on the plausibility of more recent views, like Himma's, but also on the views of Hart and Raz, who, despite having accorded coerciveness a somewhat ancillary place, still insisted on the impossibility of a non-coercive *human* legal system.[78] All of this suggests that the (conceptual or metaphysical) possibility of non-coercive human legal systems merits further and more careful attention.

7. Conclusion

Raz famously claimed that one of the major tasks of legal theory is to help people understand themselves by picking those features which are significant to the common understanding of law.[79] In this article, we have taken a step back and directly examined the common understanding of law; more specifically, we have

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[76] See Supplementary Materials (n 30) for further exploration of this idea.

[77] Even the 'Hippies' scenario, where answers fell only slightly above the midpoint, helps to challenge the view that human legal systems are necessarily coercive. Were this view as widespread among the folk as some philosophers would have us believe, our findings would be radically different (and perhaps closer to those of Study 2).

[78] See Raz, *Practical Reason and Norms* (n 1) 159; Hart, 'Theory and Definition in Jurisprudence' (n 1) 253.

examined what the common understanding tells us about the role of coercion in law. We have done so because some philosophers have claimed from the armchair that most laypeople—'the man on the Clapham Omnibus'—believe that a system must be coercive to be legal. Contrary to this assumption, we found that the common understanding is much more nuanced than that: like Hart and Raz, most of the participants in our studies tended to accept the possibility of non-coercive legal systems in scenarios like the society of angels. But, unlike Hart, Raz and most contemporary legal philosophers, our participants also tended to accept that a non-coercive legal system is possible in *human* societies.

But our studies also found something that can help us understand why some philosophers have come to think that people believe that legal systems are closely tied to coercion: the abstract/concrete paradox. When asked in abstract if law is necessarily coercive, people are more inclined to give a positive answer than when they are asked to evaluate a concrete scenario. In fact, we were able to replicate the view that coercion is necessary to *human* legal systems by using more generic vignettes about human societies (Study 2). However, as we have argued, drawing inferences about our concept of legal systems from abstract judgments alone would be to miss out an important feature of our conceptual practices: namely, that we can—and tend to—expand or narrow the extension of our concepts after reflecting upon concrete scenarios. And we do so to the point of even accepting the possibility of non-coercive *human* legal systems when the level of concreteness is high, something that calls into question recent arguments about the place of coercion in our thought and talk about legal systems.[80]

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[79] Joseph Raz, 'Authority, Law and Morality' (1985) 68 The Monist 295, 321–2.
[80] See especially Himma (n 2).