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On the (in)significance of Hume's Law

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Abstract Hume's Law that one cannot derive an "ought" from an "is" has often been deemed to bear a significance that extends far beyond logic. Repeatedly, it has been invoked as posing a serious threat to views about normativity: naturalism in metaethics and positivism in jurisprudence. Yet in recent years, a puzzling asymmetry has emerged: while the view that Hume's Law threatens naturalism has largely been abandoned (due mostly to Pigden's work, see e.g. Pigden in Aust J Philos 67(2):127–151, 1989), the thought that Hume's Law is a serious challenge to positivism has only grown in prominence. Our main aim is to establish that Hume's Law is not a threat to positivism or naturalism. First, we connect extensive, but unfortunately siloed, discussions of this issue. Second, we show that Hume's Law is not a serious threat to naturalism or positivism, for the gap between logic and such theses is very hard to bridge in a way that would make Hume's Law able to bear this significance. Finally, we emphasize an implication of our discussion: it undermines one of the main "dialectical tributaries" in jurisprudence (Toh in Law Philos 27(5):445–504, 2008).

Keywords Hume's Law · Metaphysical grounding · Legal positivism · Metaethical naturalism

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1 Introduction

Hume held that there is a gap between "is" and "ought" (1740 [1978: 469–470]). This thesis—"Hume's Law"—asserts the existence of an *entailment* barrier between normative and descriptive propositions. But its significance has often been deemed to extend far beyond logic. Hume's Law has been said to pose a serious threat to prominent views about normativity: naturalism in metaethics and positivism in jurisprudence.

A puzzling asymmetry has emerged in these literatures. The thought that Hume's Law poses a serious threat to naturalism has been largely abandoned, due mostly to Charles Pigden (1989, 1991, 2010). Yet the thought that Hume's Law is a serious challenge to positivism, which starts with Hans Kelsen (1934, 1967: 6–8), has only grown in prominence: it is invoked by both leading positivists (e.g., Raz 1974: 124–5, 1981: 456) and anti-positivists (e.g., Finnis 2011a, b). It is also a central theme in Scott Shapiro's *Legality*: positivism "appears to violate the famous principle introduced by David Hume […], which states that one can never derive an ought from an is"; meeting this "extremely serious challenge" (2011: 47) is a key goal in *Legality*. This asymmetry is puzzling partly because naturalism and positivism are often formulated similarly (e.g., moral/legal "ought" facts are fully grounded in natural/social "is" facts). If Hume's Law is (not) a serious threat to one, you'd expect that to be true for the other.

Our primary goals in this paper are two-fold. First, we connect extensive, but unfortunately siloed, discussions of this issue. Second, we show that Hume's Law is not a serious threat to naturalism or positivism—the gap between logic and such theses is very hard to bridge in a way that would make Hume's Law able to bear this significance.

Here's the roadmap. In Sect. 1, we argue that there must be a gap between Hume's Law and positivism and naturalism. In Sect. 2, we argue that the gap is hard to bridge via claims about necessitation. In Sect. 3, we argue that it is hard to bridge via claims about epistemology (targeting Shapiro's account of "Hume's Challenge"). Then in Sect. 4, we offer a general obstacle for any attempt to bridge the gap: if Hume's Law threatens naturalism or positivism, the threat over-generalizes by undermining plausible rivals to these theories. For the sake of simplicity, in these three sections we'll go back and forth between focusing on positivism and focusing on naturalism, but we'll show how the lessons carry over. We conclude by emphasizing an implication of our discussion: it undermines what Toh (2018: 17) calls one of the main "dialectical tributaries" in jurisprudence.

2 The Gap

Work that presents Hume's Law as significant for the truth of positivism or naturalism often suggests that it is a *serious direct threat* to these theses. Consider this smattering of recent examples from jurisprudence. Finnis writes that "'ought' is never derivable from 'is'," and positivism "fails to meet this demand of logic

coherently" (2011a: 4). Taggart argues that positivists need to, but cannot, "derive a legal 'ought' from (only) non-institutional social facts" (2013: 196). Hershovitz holds that Hart's positivism "seems to license inferences that run afoul of David Hume's famous injunction that you cannot derive an ought from an is", and "anyone who would defend a legal positivism like Hart's must show Hume wrong or navigate around his injunction that you cannot derive an ought from an is" (2015: 1168).

Much could be said about interpreting these authors, but we don't want to get bogged down.[1] The key point concerns what these passages, taken at face value, suggest: Hume's Law is presented as generating a good reason to reject positivism (a *serious* threat); and Hume's Law is presented as doing the heavy lifting all on its own (a *direct* threat), rather than generating a problem for positivism when coupled with further philosophically substantive auxiliary hypotheses.

This view isn't too unnatural. In some sense, Hume's Law says one can't get an "ought" from an "is", while the positivist says one can get a legal ought from a social "is" and the naturalist says one can get a moral "ought" from a natural "is". *Prima facie*, these theses look directly incompatible. But our first point is that Hume's Law cannot be *both* a serious threat and a direct threat.

Say it was a direct threat: Hume's Law is incompatible with positivism on its own, without being supplemented with any auxiliary hypotheses. This requires us to formulate Hume's Law and positivism such that the former entails the negation of the latter. But that would make an appeal to Hume's Law to reject positivism question-begging. (*Ditto* for naturalism.) Indeed, it is *worse* than question-begging, for Hume's Law has a much wider scope: it says that one cannot get *any* "ought" from an "is", while positivism just concerns the *legal* "ought". So if Hume's Law were a direct threat to positivism or naturalism, it would entail the negation of analogous views about the "oughts" of prudence, epistemology, etiquette, and so on. In other words, to infer the negation of one such thesis (e.g. positivism) from Hume's Law is to infer a conclusion that is contained within a single vastly more controversial premise. So if the threat posed by Hume's Law is direct, it cannot be serious.

The lesson here is simple, and independently obvious on reflection. For the threat posed by Hume's Law to be serious, it had better not be direct. And if the threat isn't direct, Hume's Law and positivism (or naturalism) must be formulated such that there is a gap between them. Indeed, it is independently obvious that there must be such a gap, as Hume's Law is (as Finnis put it) "a demand of logic", and however positivism and naturalism are best formulated, they certainly are not theses about logical entailment.

While the lesson is simple, it has significant and unnoticed consequences, which set up our discussion. Hume's Law can only seriously threaten positivism when it is supplemented with auxiliary hypotheses. These hypotheses need to play a certain

[1] To be clear, we are saying some philosophical prose *suggests* that Hume's Law is a direct threat, *not* that the authors are reflectively committed to that view. In some cases, we think context makes it clear that they aren't. We think this is true, for instance, of Rosati's claim that "[f]or the legal positivist … Hume's Challenge is a direct threat" (2016: 310).

role: they need to *bridge the gap* between Hume's Law and the negations of positivism or naturalism. But now enormous dialectical weight is born by these auxiliary hypotheses. Yet, such auxiliary hypotheses are rarely stated, let alone defended.

We can now state our main contention going forward: there is no set of auxiliary hypotheses that can bear this dialectical weight. In other words, any attempt to bridge the gap between Hume's Law and the negations of positivism or naturalism turns out to rest on implausible philosophical commitments.

3 Naturalism and Necessitation

Hume's Law was once widely regarded as posing a serious threat to naturalism. James Rachels noted that "Hume is credited with first observing that we cannot derive 'ought' from 'is', and "[i]t is commonly assumed that, if this is true, the naturalistic project is doomed" (2000: 75–76). Similarly, Pigden said "it is often assumed that if moral judgements can be derived from non-moral propositions, naturalism is true. If not, naturalism is false" (1991: 422–423). Such assumptions are now much less common than they used to.

And rightly so. In this section, we provide a novel argument for this conclusion. First, we identify the gap between Hume's Law and naturalism. Then, we show how hard it is to bridge it: natural candidates for bridge principles that would play this role turn out to be implausible.

A. Mind the Gap

Our first task hews closely to important work by Pigden (1989, 1991, 2010), who argued that once we have clear formulations of Hume's Law and naturalism, there is a conspicuous gap between the two. We'll show why this is also true on formulations of both naturalism and positivism that are now more prominent.

Starting with Hume's Law, we follow others in taking it to express a putative "implication barrier" between "ought" and "is" statements:[2] it asserts that no set of "is" statements logically entails any "ought" statement. This characterization of Hume's Law as a thesis about logical entailment is a near-orthodoxy,[3] and is shared by most of our opponents in this project. (Notice how frequently our opponents gloss Hume's Law in logical terms: premises, conclusions, inferences, validity, and so on.)

We also follow others in taking the scope of Hume's Law to be *normative* and *descriptive* statements, rather than "ought" and "is" statements per se: "is"

[2] See Russell and Restall (2010), Russell (2010).

[3] See Pigden (1989), Russell and Restall (2010), Russell (2010), Schurz (1997), and Singer (2015). See also every chapter in the recent volume on Hume's Law, Pigden (2010). The understanding of Hume's Law that is relevant in this literature, and which will be discussed here, is hence different from a barrier to analytic or a priori entailment.

statements that ascribe goodness or wrongness are properly regarded as being within the ambit of the Law.[4] And for convenience, we assume that the *relata* of the entailment are propositions.[5] Based on this, we can formulate Hume's Law precisely as follows:

HUME'S LAW No normative proposition p_n is logically entailed by any collection of descriptive propositions Γ_d.[6]

Since Prior (1960), it has been disputed whether this logical thesis faces counterexamples.[7] So whether the thesis is true is a significant issue. But we take no stand on that. We focus on a different issue: *if* it is true, (how) does it threaten naturalism? That is, our concern lies with the *compatibility* of Hume's Law and naturalism. (We won't discuss non-logical characterizations of Hume's Law for reasons of space, but it should be clear that many points we raise will carry over to such characterizations.)

Let's turn to naturalism. While it is one the most prominent views in metaethics, there has been a lively debate about how to formulate it. It used to be framed in quite demanding terms as a thesis about reduction or property identity (including by Pigden).[8] It is now more common to formulate it in terms of *grounding*[9]:

NATURALISM For every moral fact $[p_m]$ there is some collection of descriptive natural facts Γ_{dn} such that $[p_m] \leftarrow \Gamma_{dn}$.[10]

Naturalism says that for every moral fact there is a collection of natural facts that fully grounds it, so facts about what one morally ought to do are fully grounded in descriptive facts. (This simple formulation can be fine-tuned in various ways that don't affect the discussion that follows.)

We can now identify the gap. While in some sense both Hume's Law and naturalism concern some relation between normative and descriptive realms, when formulated precisely they invoke both *different relations* and *different relata.* Whether there is a barrier to *entailment* between descriptive to normative *propositions* does not, on its own, have a direct bearing on whether normative *facts* are *grounded* by descriptive *facts*. So Pigden was right that Hume's Law *on its*

[4] See the examples cited by Maguire (2017: 432).

[5] Nothing of substance hangs on this. But see Fine (2021) for a defense of the assumption.

[6] Some conventions on notation. We use "p" to denote a proposition, "[p]" to denote the fact that p, and Greek capitals to denote sets of propositions or facts depending on the context. Subscripts—"p_d" and "$[p_d]$"– denote that a proposition/fact is descriptive (or…).

[7] See Pigden (1989), Schurz (1997), Singer (2015), and Russell and Restall (2010); cf. Woods and Maguire (2017).

[8] Pigden (1989: 128), (1991: 421), and (2010: 219).

[9] See especially Rosen (2010, 2017).

[10] "[p] ← Γ" means "the fact that p is fully grounded by the facts in Γ". Greek capitals are used variably to denote sets of propositions or facts (context should make clear what is referred to on a given occasion, see also fn. 6).

own does not threaten naturalism: "Naturalism, it seems, is logically independent of [Hume's Law]. Whether [Hume's Law] is true or false, naturalism could be true or false."[11] One cannot pull a metaphysical rabbit out of a logical hat.

But this raises a further, under-explored question: Can this gap between logic and metaphysics be bridged? In other words, can Hume's Law be coupled with auxiliary hypotheses to pose a serious threat to naturalism?

Our contention is that it can't. The onus, of course, should be on those who take Hume's Law to pose a serious threat to identify and defend the requisite auxiliary hypotheses. But we don't want to rest our case on this. Though we cannot consider every possible way of bridging the gap, we'll show how hard it is to bridge by considering two natural routes one might take: appealing to auxiliary hypotheses about necessitation (Sect. 3.B) or about epistemology (Sect. 4.C). On the way, we'll note how our discussion of naturalism carries over to similar concerns about positivism (and vice versa), as well as to other formulations of each. Finally, we'll raise a general barrier for vesting Hume's Law with such significance: any attempt to do so will prove too much and therefore overgeneralize (Sect. 4).

B. Necessitation

Since entailment and grounding bear intimate connections to necessity, perhaps the most natural route to bridge the gap will be via auxiliary hypotheses about necessitation. We'll sketch how that would work, then show why the threat isn't serious: the conjunction of Hume's Law and the two auxiliary hypotheses is implausible.

The first hypothesis links grounding to metaphysical necessitation:

G2N Link If $[p] \leftarrow \Gamma$, then $\Box_M(\wedge\Gamma \rightarrow p)$.[12]

G2N Link says if the fact that p is fully grounded in a collection of facts (Γ), the corresponding conjunction of propositions ($\wedge\Gamma$) metaphysically necessitates *p*. There is no metaphysically possible world where the full grounding base obtains, yet the grounded fact does not. G2N Link is widely accepted:[13] grounding

[11] Pigden (2010: 224; see also 1989, 1991). We are being explicit about where we are indebted to Pigden, but the remaining issues we raise go beyond his work. (Though Pigden (1989)'s point that property identity doesn't suffice for entailment because property identities can be a posteriori does relate to one of our three reasons for rejecting one of the four bridge principles we discuss, N2E Link.) We also aren't relying on Pigden's other two main arguments for the view that Hume's Law does not pose a serious threat to naturalism. The first is that Hume was a naturalist and endorsed Hume's Law, so the two theses are compatible (see Pigden 2010: 134, 187; Pigden 2016). The second is that Hume's Law is merely an instance of the conservativeness of logic: it parallels the point that one cannot derive "hedgehog" conclusions form "hedgehog-free" premises (Pigden 1991). We want to stay neutral on whether Hume's Law is a more exciting logical theorem than this (see Schurz 1997, Russell and Restall 2010).

[12] Following Rosen (2010), we use "$\wedge\Gamma$" to denote the conjunction of the propositions that correspond to the facts in Γ.

[13] Audi (2012), Rosen (2010), Trogdon (2013).

is such an intimate connection between distinct entities that what is grounded cannot "float free" of its grounds.

The second hypothesis links metaphysical necessitation to entailment:

N2E Link If $\Box_M(\wedge\Gamma \rightarrow p)$, then Γ entails p.

N2E Link says that if p is metaphysically necessitated by a conjunction of propositions ($\wedge\Gamma$), p is logically entailed by (the set of propositions corresponding to) that conjunction. This looks attractive if we adopt modal characterization of logical entailment, and take metaphysical necessity to be unrestricted—i.e., if p is metaphysically necessitated by $\wedge\Gamma$ just in case it is absolutely impossible for p to be false if $\wedge\Gamma$ is true. Entailment is often glossed in terms that suggest such commitments.[14]

The conjunction of these principles shows that there are ways of bridging the gap between Hume's Law and naturalism, so naturalists face *a* threat: if naturalism and G2N Link are true, "is" propositions metaphysically necessitate "ought" propositions, and if N2E Link is true, the former propositions logically entail the latter. So naturalism violates Hume's Law.

But this threat is weak, and its shortcomings are instructive. Naturalists should reject the conjunction of Hume's law, G2N Link, and N2E Link.

The first, and least serious, issue is the uncertain status of G2N Link. Grounding contingentists deny this due to concerns like the following. Say universal generalizations are grounded in their instances: at the actual world the facts $[Fa_1]$, …, $[Fa_n]$ collectively ground the fact $[\forall xFx]$. Now consider a possible world where $[Fa_1]$, …, $[Fa_n]$ all obtain but $[\forall xFx]$ does not: some further entity, c, is not F, and thereby *disables* $[Fa_1]$, …, $[Fa_n]$ from grounding $[\forall xFx]$. So $[Fa_1]$, …, $[Fa_n]$ ground, but don't necessitate, $[\forall xFx]$.[15]

The second, more serious problem lies with N2E Link. N2E Link is motivated by the move from absolute necessity to entailment, and from metaphysical necessity to absolute necessity. Both moves are dubious.

It is an orthodoxy that *entailment is formal*. That is, a statement p is logically entailed by a set of statements Γ only if two conditions hold:

Necessity It is absolutely impossible for all the members of Γ to be true while p is false, and

[14] Hanson (1997) points out how often logical entailment is characterized in strictly modal terms, before criticizing these characterizations. Cf. Ridge (2006) and (2014: 154–155).

[15] See e.g. Leuenberger (2014) and Skiles (2014). See Chilovi (2021) for discussion of their arguments, and for a defense of a "contingentist" link between grounding and modality (i.e., weaker than G2N Link.) Bliss and Trogdon (2016) offer similar normative examples of *disablers*, drawing on Dancy (2004): at the actual world a descriptive fact grounds a normative fact (that you promised to φ grounds the fact that you have a reason to φ), but other facts could *disable* this (e.g. the promise was made under duress).

FORMALITY The truth of the members of Γ guarantees the truth of *p* in virtue of the form of the statements involved.

This view traces back at least to Tarski (1936: 414), and is widely endorsed despite a lively debate about how to unpack Formality: see *inter alia* Sagi (2014: 945) and Stewart Shapiro (1998: 132). For current purposes there is no need to engage in this debate. As Sagi (2014: 946) notes, the *role* of Formality is to allow us to "bypass metaphysical considerations", with the consequence that "some necessarily true sentences […] will not be logically valid." The best way to motivate this is via examples. Consider one from Hanson (1997: 368): that water exists may metaphysically necessitate that H_2O exists, but it does not *logically entail* that H_2O exists. Or one from Schroeder (2015: 169): compare the argument *if Superman is strong, then I am a walrus*; *Superman is strong*; So, *I am a walrus*, and an instance of this argument where the second premise is *Clark Kent is strong*. Superman and Clark Kent are identical, so both sets of premises necessitate the same conclusion. But only the first argument is valid. Even without a full-blown account of Formality on the table, these examples illustrate why entailment should be restricted to instances of necessary truth-preservation *in virtue of form*.

But suppose that Formality is *not* a requirement on entailment, and satisfying Necessity is sufficient.[16] N2E Link is still dubious, as *metaphysical* necessity is plausibly weaker than the *absolute* necessity required for entailment. Schaffer (2016, 2017) makes a compelling case that the metaphysically possible worlds are the logically possible worlds with the same metaphysical laws, such that metaphysical necessity is *restricted*. This is one illustrative example of a general approach where other interesting notions of necessity—metaphysical, nomological, etc.—are defined by restricting logical necessity (see Lange 2009). The same examples from the previous paragraph can be used to motivate this general approach: there may be no metaphysically possible worlds where water $\neq H_2O$, but there are logically possible worlds where this is so. So N2E Link is false, with the upshot that it is consistent with naturalism (and positivism) that in all *metaphysically* possible worlds "is" propositions guarantee "ought" propositions, but in some *logically* possible worlds they don't.

Now for the third, most technical problem. The conjunction of Hume's Law and N2E Link rules out the supervenience of the moral on the natural. On this supervenience thesis, any two metaphysically possible items (objects, actions, etc.) that are alike in every non-normative respect must also be alike in every normative respect. Rosen (2020) calls this "the least controversial thesis in metaethics," which isn't idiosyncratic.[17]

[16] See Dutilh Novaes (2012), Etchemendy (1983), and Read (1994).

[17] While we've used Rosen's (2020) formulation of supervenience, little turns on this. Our point is that the supervenience thesis entails the metaphysical necessitation of the normative by the descriptive. That is widely accepted (see McPherson 2019), and obvious in other formulations (e.g., from Väyrynen (2017: 172): $\Box_M(\forall F{\in}\alpha)(\forall\ x)[Fx \rightarrow (\exists G{\in}\beta)(Gx \wedge \Box_M(\forall y)(Gy \rightarrow Fy))]$).

But this thesis is inconsistent with the conjunction of Hume's Law and N2E Link. The basic problem is that if supervenience holds, then for any normative proposition there will be some descriptive propositions that metaphysically necessitate it.[18] Add N2E Link and we get that descriptive propositions entail normative propositions, violating Hume's Law.

We think denying supervenience is a cost for non-naturalists. Most non-naturalists agree.[19] And crucially, those who cast doubt on supervenience theses do not usually deny the claim about *metaphysical* necessity at issue here.[20] This makes wielding the conjunction of Hume's Law and N2E Link a double-edged sword: if it threatens naturalism, it also generates a serious problem for non-naturalism in the process.

Before moving on, we want to note that these points carry over directly to positivism if that thesis is also formulated in terms of grounding (see Sect. 4.B). But they are also instructive if one prefers rival formulations, like once-prominent modal formulations of positivism.[21] Adopting such a formulation might narrow the gap by removing the need to link grounding to necessity. But it does nothing to remove the need for something like N2E Link to bridge the gap between entailment and necessity. And this hypothesis will generate the same serious problems for anti-positivists: as Greenberg (2004: 160) notes, anti-positivists are no less committed to the supervenience of legal facts on social facts.[22] So alternative formulations might narrow the gap between Hume's Law and naturalism or positivism without making it much easier to bridge.

[18] Our reasoning is familiar (see e.g. Jackson 1998). Let *a* be a particular item that instantiates some normative property *N*. It also has a maximally specific descriptive profile, *D*, capturing the non-normative properties and relations it exemplifies. Supervenience implies that anything that is non-normatively indiscernible from *a* must be normatively indiscernible from it. So anything that has *D* cannot fail to instantiate *N*: $\Box_M(\forall x)(Dx \rightarrow Nx)$. So *Da* necessitates *Na*. Coupled with N2E Link, *Da* will entail *Na*.

[19] See, e.g., Enoch (2011: 141–2). When pressed by Rosen (2017: 4) on whether he denies "the received view" of supervenience—which includes a claim about metaphysical necessity—Scanlon (2017: 895) recently affirmed that on his view the "connections [between the normative and the natural] are metaphysically necessary.".

[20] Many—like Harrison (2013), Roberts (2018), and Sturgeon (2009)—who challenge the full supervenience thesis do *not* deny that whenever something has a normative property, N, it has a natural property that metaphysically necessitates N. They deny that this claim about metaphysical necessity is true as a matter of conceptual necessity.

[21] Hart's "The Separability Thesis" is one modal formulation of positivism (1994: 185–6): there are no necessary connections between law and morality. That formulation has fallen from favor (see, e.g., Green and Adams 2019: §4.2). We're also unsure how it's even *prima facie* incompatible with Hume's Law. But we leave this issue aside.

[22] This is because necessary facts can only be redundant elements of a (non-empty) supervenience base. The "relevant moral facts" are the facts about the moral principles that for an anti-positivist should be added to the social facts as further grounds of the legal facts. This point is further elaborated in Sect. 5 below.

4 Positivism and Epistemology

Hume's Law has a more prominent and more complex status in contemporary jurisprudence. Our first task is to clarify this. Then we will explain the gap between Hume's Law and the negation of positivism, and why the gap is hard to bridge via claims in epistemology. In this third task we respond to the best defense account of Hume's Challenge to positivism, from Shapiro.

A. The Prominence of "Hume's Challenge"

Claims that Hume's Law poses a serious threat to positivism are prominent, but they differ along two dimensions. The first is whether Hume's Law *directly* threatens positivism, or only threatens positivism *when supplemented with certain auxiliary hypotheses*. One reason we focus on Shapiro's account in Sect. 4.C is that identifies an initially promising place to look for such auxiliary hypotheses.

The second is whether Hume's Law (and the auxiliary hypotheses) pose a *decisive objection*, or just generate a *major problem*—i.e., whether positivism is shown to be false, or false unless positivists provide a solution. Positivists often frame Hume's Law as posing a threat in this second way. Kelsen (1934, 1967) famously took this line:

> Kelsen's objection to [versions of legal positivism] is motivated by his understanding and appropriation of the Humean *is-ought* gap. Laws, including the basic norm, are norms; and such norms cannot obtain in virtue only of some social facts (Toh, 2018: 17–18).

Indeed, Kelsen's most distinctive contribution to jurisprudence—the *Grundnorm,* or basic norm—was motivated as the only viable solution to this problem. Here's Marmor's explanation (2016: §I):

> At some stage, in every legal system, we get to an authorizing norm that has not been authorized by any other legal norm, and thus it has to be presupposed to be legally valid. The normative content of this presupposition is what Kelsen has called the basic norm. The basic norm is the content of the presupposition of the legal validity of the (first, historical) constitution of the relevant legal system (GT, 110–111). As Kelsen saw it, there is simply no alternative. More precisely, any alternative would violate David Hume's injunction against deriving an "ought" from an "is".

Kelsen's discussion of Hume's Law is still very influential. Toh says it forms one of the most prominent "dialectical tributaries" in jurisprudence, citing Raz (1974: 124–5), Green (1999: 35–36), and Marmor (2009: 158–159). Like Toh, we think there is textual evidence that these authors endorse Kelsen's basic understanding of the problem.[23] Many others take Hume's Challenge seriously.[24] Toh (2008) even

[23] See Marmor (2010: 16–17) and Raz (1974: 124–5). For a helpful discussion of the relationship between Kelsen's and Raz's views on this, see Goldsworthy (1990: 174).

[24] See Raz (1979: 124–125; 1981: 456; 1999: 171–177); Marmor (2010: 17; 2016: §1, §3); Marmor and Sarch (2019: §2.1.2); Bix (2015: 129–131); Gragl (2017); Demiray (2015).

took up this Kelsenian "dialectical tributary", arguing at length that positivism is in tension with Hume's is-ought gap, and concluding from this that positivism should be redefined. And the is-ought gap is also frequently treated as a key component of the broader problem of whether positivism can explain the "normativity" of law.[25]

The Challenge also continues to motivate important positivist commitments that aim to solve this problem in one of two ways. To paraphrase Rosati (2016: 310): either it's "is" from "is", or it's "ought" from "ought". Shapiro (2011) takes the former line, with a strategy that hinges on a conceptual or semantic commitment: sentences about one being legally obligated to perform some action "may be understood to mean that from the legal point of view one is (morally) obligated to perform that action" (2011: 185).[26] This commitment is motivated by how it solves the is/ought gap: "legal statements [about what we ought or are obligated to do] are descriptive … because they describe the moral perspective of the law" (2011: 191), and these true descriptive propositions about the moral perspective of the law can be entailed by descriptive propositions alone compatibly with Hume's Law. In other words: no "ought" from "is", only an "is from an is" (2011: 188).[27]

We're skeptical of these semantic and conceptual commitments, but we won't argue against them here.[28] The important point is that *if* what we say about Hume's Challenge is right, commitments like these are under-motivated. They are solutions in search of a problem.

B. The Gap: A Reminder

Discussions in jurisprudence rarely acknowledge the analogous issue for naturalism,[29] and the gap between Hume's Law and positivism. But this gap is obvious when the relevant views are formulated with precision.

We'll keep our earlier formulation of Hume's Law. Our opponents in this project, like Shapiro and Finnis, also accept that it concerns entailment.[30]

[25] Here's an illustrative example: "If law is a matter of fact, not value, then what can *explain its normative force*? How can we *derive a normative conclusion* (about law's authority) from a factual premise (it's legality)?" (Coleman and Leiter 1996: 244, emphasis ours). See also Raz (1999: 154–155, and 170–177), Green and Adams (2019: §2), and Marmor and Sarch (2019: §2.1.2). Cf. Bix (2006: 7). See Rosati (2016) for especially insightful discussion.

[26] As Shapiro notes (2011: 422 fn. 23), this is "heavily indebted to the work of Joseph Raz" (see also, pp. 414–415 fn. 44); cf. Raz (1999: 175–76). Coleman notes that "Raz and Shapiro are among the strongest advocates of the moral semantics claim" (2007: 593).

[27] We won't discuss the second strategy. Hart is often treated as the paradigmatic example of it: see Shapiro (2011: 99–100, 112, 191). There is room for debate about which camp Kelsen's Grundnorm falls into: see Marmor (2010: 17–20, 2016); cf. Shapiro (2011: 422, fn. 26). For an excellent comparison between Shapiro's solution and Hart's, see Rosati (2016).

[28] For critical assessments of Shapiro's appeal to these semantic commitments to solve the problem posed by Hume's Challenge, see Rosati (2016) and Wodak (2018).

[29] Rosati (2016) is an exception, but does not make the same points we make here.

[30] See e.g., Shapiro (2011: 48) and Finnis (2011a: 4; 2011b: 37, 441).

For now, we'll follow others, including Shapiro, in formulating positivism as a thesis about grounding that is structurally akin to naturalism:[31]

POSITIVISM For every legal fact $[p_l]$ there is some collection of social facts Γ_s such that $[p_l] \leftarrow \Gamma_s$.

That is, for every legal fact, there is some set of social facts that fully grounds it. (This formulation can be fine-tuned; but it will suffice here.)

If Hume's Law concerns entailment and positivism (like naturalism) concerns grounding, there's a similar gap between the former and the latter. This makes the asymmetry between discussions of naturalism and positivism initially puzzling. But we're just using that sociological point as a hook: our case does not hang on this formulation of positivism. There are alternatives. Some are, unfortunately, hard to pin down: it is common to formulate positivism in terms of an unspecified notion of dependence (see Gardner 2001), which *may* mean metaphysical dependence (grounding), but may not.[32] However, we've seen that there is also a gap that's hard to bridge if we adopt modal formulations of positivism. And we'll see below that the same holds for other formulations.

C. Can We Bridge the Gap via Epistemology?

So: can this gap between Hume's Law and positivism be bridged? To our knowledge, the best attempt to bridge it comes in Shapiro's account of Hume's Challenge in *Legality*. This account appeals to epistemological bridge principles in a way that makes it interestingly different from the route we considered in Sect. 3. Moreover, Shapiro's account of Hume's Challenge has been widely endorsed—by, e.g., Guest (2012: 553) and Bix (2012: 445)—and otherwise not been subject to serious critical scrutiny.[33] No one has cast doubt on the epistemological claims it rests on.

[31] See Shapiro (2011: 27, 48, 269–271). Shapiro's formulation of the thesis differs from ours below, but in ways that don't matter for our discussion. What matters is that Shapiro explicitly characterizes positivism in terms of grounding, understood as a metaphysical relation: see especially Plunkett and Shapiro (2017: 38). Plunkett and Shapiro (2017: fn. 1) also list Greenberg (2004), Rosen (2010), and Plunkett (2012) as characterizing the debate about positivism in terms of the metaphysical relation of grounding. Chilovi and Pavlakos (2019) offer a positive argument for this claim. Chilovi (2020) puts forward a more nuanced ground-theoretic formulation of positivism than the one given here, but since these differences don't affect the current discussion, for the sake of simplicity we shall work with the full grounding thesis. Relatedly, in their overview of the positivism—anti-positivism debate, Marmor and Sarch (2019) say the issue concerns the "*metaphysical reduction* of law".

[32] Green and Adams (2019) speak of dependence as a relation that concerns what "determine[s] whether laws or legal systems *exist*". Raz (1979: 65) says that certain legal claims are "true, according to the sources thesis, because of the existence of a source.".

[33] Rosati (2016) disputes Shapiro's *solution*, but doesn't question Shapiro's characterization of the problem posed by Hume's Challenge—indeed, she seems to accept it. Shapiro's account of Hume's Challenge goes unquestioned in critical responses, such as Hershovitz (2014). And it has not been addressed outside philosophy of law—which is another respect in which our discussion goes beyond, e.g., Pigden's. Finally, it's worth noting that some, like Toh (2018: 18), declare that Shapiro "essentially replicates" Kelsen's articulation of Hume's Challenge; this overlooks the epistemological bridge principles in *Legality* (which don't replicate Kelsen).

Here's the critical passage where Shapiro explains Hume's Challenge:

> According to the legal positivist, the content of the law is ultimately determined by social facts alone. To know the law, therefore, one must (at least in principle) be able to derive this information exclusively from knowledge of social facts. But knowledge of the law is normative whereas knowledge of social facts is descriptive. How can normative knowledge be derived exclusively from descriptive knowledge? That would be to derive facts about what one legally ought to do from judgments about what is the case. Legal positivism, therefore, appears to violate the famous principle introduced by David Hume (often called Hume's Law), which states that one can never derive an ought from an is (2011: 43).

Here Shapiro appeals to *two* distinct epistemological principles. Neither is made explicit, let alone defended. We're inclined to reject each. But what matters is that the conjunction of both and Hume's Law should be rejected.

First, Shapiro needs to justify the inference from the first sentence above to the second. The implicit general principle that's relied on here seems to be:

> G2K Link — If facts about *A* are fully grounded in facts about *B*, one can in principle derive knowledge of the *A*-facts exclusively from knowledge of the *B*-facts.

In full generality, this principle has been challenged in various ways. Many, including Block and Stalnaker (1999), have held that knowing that there's H_2O can fail to put one in a position to know that there's water, even though facts about water are (fully grounded in) facts about H_2O. Similarly, type-B physicalists have long made a powerful case that phenomenal facts can be fully determined by physical facts, even though phenomenal concepts are opaque in a way that precludes one from getting knowledge of the former purely on the basis of the latter.[34] More recently, mereological principles of composition have been claimed to be likewise non-transparent, with the consequence that knowledge of the existence of simples wouldn't be enough to yield knowledge of the existence of composites, even if wholes are grounded in their parts (see Schaffer 2017).

In these cases, what one needs to derive knowledge of the grounded from knowledge of its grounds is access to how the grounds and grounded are related, i.e. access to general grounding principles. The fact that some such principles are plausibly a posteriori, conceivably false, or otherwise opaque makes a rival to G2K Link more attractive:

> Attractive Rival — If facts about *A* are fully grounded in facts about *B*, one can in principle derive knowledge of the *A*-facts from knowledge of the *B*-facts *in conjunction with* knowledge of the relevant grounding principles.

[34] See e.g. Díaz-Leon (2011), Lycan (1996), and Tye (1995).

One of us has even argued that this rival is especially attractive when it comes to law.[35] Knowledge of the grounds of legal content is plausibly compatible with reasonable uncertainty about what legal content they generate: knowing *which* facts make law doesn't settle *how* they make law.

But say we spot Shapiro G2K Link. He still needs to justify the inference in the second half of the passage above: that if "normative knowledge [can] be derived exclusively from descriptive knowledge", this violates Hume's Law. The epistemological principle Shapiro seems to be relying on here is:

> E2K Link If propositions about *A* do not logically entail propositions about *B*, one cannot in principle derive knowledge of *B* from knowledge of *A*.

This is where the trouble really starts. E2K Link, especially when conjoined with Hume's Law, generates untenable skepticism in two ways.

First, the is/ought gap has a similar status to other barriers to implication: no set of particular propositions logically entails a universal proposition; and no set of propositions about the past logically entails a proposition about the future (see Russell 2010: 154–159). Conjoined with E2K Link, these barriers to implication would show that one cannot derive knowledge of a universal from knowledge of particulars, or knowledge of the future from knowledge of the past. So E2K Link and Hume's Law put one on a clear path towards skepticism about induction.

Second, as Harman (1984) argued, human reasoning rarely fits the model of deductive inference. We see *a*, *b*, *c*, …, observe that *Fa*, *Fb*, *Fc*, …, and infer from this that $\forall xFx$—without believing any further premise that would make this inference deductively valid. If E2K Link is true, such conclusions are not doxastically justified (even if they're propositionally justified). So skepticism looms: we know little. Similarly, Horty (2004, 2011) argues that *legal* reasoning is often best modeled on a non-monotonic logic. Indeed, there's a long, influential line of thinking from Oliver Wendel Holmes, Jr. (1881) and Roscoe Pound holding that jurisprudence does not follow a "method of deduction" (Pound 1912: 464). If this view is right *and* E2K is true, then lawyers' and judges' conclusions are not known, as they're not based on deductively valid inferences.

In case it seems that we're being uncharitable to Shapiro, consider how he frames Hume's Law in relation to good reasoning and inference patterns:

> Because normative conclusions cannot be derived exclusively from descriptive premises, normative reasoners must conform to a certain pattern of inference: they must ensure that their reasoning takes a normative judgment as input if a normative judgment is the output. Call this "normative in, normative out" pattern of inference a "NINO" pattern. Hume's Law is violated, therefore, if a normative judgment comes out but only descriptive judgments went in. Call this offending sequence a "DINO" pattern.

[35] Chilovi and Pavlakos (ms).

> The worry about legal positivism […] is that it violates Hume's Law by licensing DINO patterns of inference. […] Call this objection to legal positivism "Hume's Challenge" (2011: 48).

This passage assumes that good forms of reasoning and inference must be deductively valid. As a *reductio*, consider a parallel argument about time:

> Because it is a Law that conclusions about the future cannot be derived exclusively from premises about the past, predictors must conform to a certain pattern of inference: they must ensure that their reasoning takes a judgment about the future as input if a judgment about the future is the output. Call this "future in, future out" pattern of inference a "FIFO" pattern. The Law is violated, therefore, if a judgment about the future comes out but only judgments about the past went in. Call this offending sequence a "PIFO" pattern.

Unless inferences must be deductively valid, that propositions about the future cannot be logically derived from propositions about the past does not preclude us from engaging in knowledge-yielding PIFO inferences. And since Hume's Law about "is" and "ought" is analogous to the barrier to implication about the past and the future, E2K Link provides no reason to allow PIFO patterns of inferences but forbid DINO patterns of inference.

One might try to jettison E2K Link at this point. But if one adopts a *weaker* commitment than E2K Link, one will need a *stronger* commitment than G2K Link to support the Challenge. Shapiro sometimes suggests one: that if the content of the law is ultimately determined by social facts alone, one can *only* derive knowledge of the law from knowledge of its social grounds.[36] This just shifts the bump in the rug. Your testimony can give us knowledge of facts about your mental states, without that knowledge being derived from knowledge of what grounds those facts. Likewise, even if positivism is true, we can still learn the content of the law via testimony from legal experts, not just via learning the social facts that ground legal facts. Otherwise, how would legal advice work?

There are three lessons here. First, we see no good way to bridge the gap between Hume's Law and positivism (or naturalism) via epistemology. Tying any important epistemic notion like justification or knowledge to logical entailment generates skepticism. This is an obstacle for any attempt to extend the significance of Hume's Law far beyond logic.

Second, Shapiro's account of Hume's Challenge is the best we know of. But the auxiliary hypotheses it rests on are unstated, undefended, and ultimately implausible. Yet they've received no scrutiny to date. This suggests that the gap between Hume's Law and the denial of positivism, and the dialectical weight born by auxiliary hypotheses, has not been appreciated. This matters for anti-positivists who treat Hume's Law as a reason to reject positivism and for positivists who treat it as a problem which thereby motivates their additional commitments as solutions (e.g., the *Grundnorm*).

[36] "To obtain the answer [to whether the death penalty is constitutional], positivism *requires* the reasoner to take note of certain social facts" (Shapiro 2011: 48, emphasis ours).

Third, the problems with these bridge principles are instructive even if one prefers an alternative formulation of positivism. Here's why. Given the path Shapiro has taken, the only way we can see to narrow the gap between Hume's Law and the negation of positivism is to take positivism to be committed to an epistemic thesis (which is not unprecedented).[37] This removes the need for G2K Link. But E2K Link remains necessary, and that's where the trouble really starts. So again, alternative formulations might narrow the gap without making it much easier to bridge.

5 Proving too Much?

We'll now offer one final, general obstacle for investing such significance in Hume's Law: *if* it threatens naturalism (or positivism), it'd prove too much, as it'd threaten plausible rivals to this theory about normativity.

Here's the problem. Hume's Law is *universally quantified*: for any normative proposition p_n, p_n is not entailed by any collection of descriptive propositions alone. Non-naturalism is only *existentially quantified*: some normative facts are not fully grounded in any collection of descriptive "natural" facts. Many plausible varieties of non-naturalism also commit to there being *some* normative facts that *are* fully grounded in natural facts (we'll say why in a moment). Now suppose there's a way of bridging the gap between Hume's thesis about entailment and the naturalist's thesis about grounding—i.e., suppose there's *some* set of true principles like G2N Link and N2E Link or G2K Link and E2K Link. If this is the case, these principles will imply that if a normative proposition is not entailed by any collection of descriptive propositions alone, then the corresponding normative fact won't be grounded in any collection of descriptive facts alone. Since Hume's Law is universally quantified, this would imply that *no* normative fact can be grounded in descriptive facts alone. So it undermines a commitment of many plausible varieties of non-naturalism.

Let's walk through this. Given its relation to naturalism, non-naturalism is usually formulated as the existentially quantified claim that some normative or moral facts are not fully grounded in any collection of natural facts (see e.g. Rosen, 2017):

NON-NATURALISM For some moral fact $[p_m]$, there is no collection of descriptive natural facts Γ_{dn} such that $[p_m] \leftarrow \Gamma_{dn}$.

This allows that *some* moral/normative facts are fully grounded in natural facts. Call this view 'Modest':

MODEST For some normative fact $[p_n]$, there is a collection of descriptive natural facts Γ_{dn} such that $[p_n] \leftarrow \Gamma_{dn}$.

[37] Greenberg suggests that positivism is committed to an epistemic claim as a "corollary" to a metaphysical claim about dependence (2004: 159). Arguably, Raz sometimes glosses positivist commitments in epistemic terms: "A law is source-based if its existence and content can be identified by reference to social facts alone, without resort to any evaluative argument" (Raz 1994: 210–211). We thank Kevin Toh for helpful discussions here.

There are good reasons for non-naturalists to accept Modest. First, it provides non-naturalists with resources to help pay their explanatory debts. For instance, Leary offers a way for non-naturalists to explain how *sui generis* moral properties that aren't fully grounded in natural properties nonetheless supervene on natural properties. The solution: they are grounded in intermediary "hybrid" moral properties, and the hybrid moral properties are fully grounded in natural facts (2017: 99). These hybrid properties act as a two-sided tape between the natural and the normative, explaining why the latter can't float free of the former. The important point is that we can only posit such hybrid properties as two-sided tape if we accept Modest. More generally: allowing some normative facts to be fully grounded in natural facts provides explanatory resources.

Second, Modest is independently plausible. Non-naturalism is usually defended as a view about *morality*. But Modest is a thesis about normativity. And for some normative domains, naturalism is more plausible. It may be that moral facts are not fully grounded in natural facts, but prudential or epistemic facts are. Why? Perhaps prudence is distinctively subject to an "anti-alienation" constraint that requires us to be subjectivists about well-being (see Rosati 1995). Subjectivism about well-being might not entail naturalism (Lin 2017: 355), but it can be used to support it. Or perhaps the central concerns about moral naturalism are extensional, but no similar concerns arise for explaining epistemic reasons in terms of probabilifying truth.[38] Naturalism may even be the default view for "formally normative" domains like etiquette.[39] So one may want to be a non-naturalist about morality but a naturalist about some other normative domain. But that requires one to accept Modest.

The final step is to show that *if* Hume's Law threatens naturalism, it threatens Modest. The issue is that *if* we find a way to bridge the gap between entailment and naturalism—whether by hypotheses about necessitation or epistemology—the result will have the same scope as Hume's Law. Since Hume's Law is universally quantified, the result will be that *no* normative facts are fully grounded in descriptive facts. The same point about scope holds for other ways of formulating naturalism.

Similar points may carry over to positivism and anti-positivism. For Dworkin (1986), facts about what you legally ought to do are ultimately explained in terms of considerations of *justification* and *fit*; the former are moral, and the latter are descriptive. A modest Dworkinian commitment would allow that sometimes considerations of fit fully ground legal facts (e.g., when the social sources of law leave no room for rival interpretations, considerations of justification don't arise).[40] That modest commitment turns out to be threatened *if* Hume's threatens positivism.

[38] See Smith (2017) for an interesting discussion of a similar split between practical and epistemic normativity. Smith objects to any view which posits such a split (2017: 102), but one of us has argued that Smith's objection is not compelling (see Wodak 2020).

[39] On formal normativity, see *inter alia*, McPherson (2011). It may not matter here whether such domains are "genuinely normative": what matters is that they are *formally normative*, since if Hume's Law is true then it holds for all propositions with the relevant *form*.

[40] We don't attribute this to Dworkin; some of the thorny issues that attribution would raise are discussed by Greenberg (2004: fn. 47). Others relate to inclusive legal positivism.

6 Conclusion

For all we've said, Hume's Law is a significant logical theorem. But its significance has often been deemed to extend far beyond logic. And on that front, we're skeptical. There must be a gap between Hume's Law and any theses it is used to challenge, like naturalism and positivism. Yet the need for auxiliary hypotheses to bridge that gap is under-appreciated, and it is hard to locate plausible principles that are apt to play that role—we've shown that appealing to metaphysical or epistemic principles won't help. Moreover, once the challenge is up and running, it's hard to constrain the challenge to only target the naturalist's or positivist's commitments; it will, like Hume's Law, have a universally quantified scope. These are reasons to think that Hume's Law should not be vested with such significance. And that point is especially important in jurisprudence, for it suggests that a dialectical tributary that started with Kelsen and continues to occupy a central place in the field should, perhaps, dry up.

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References

Audi, P. (2012). Grounding: Toward a theory of the in-virtue-of relation. *The Journal of Philosophy, 112*, 685–711.

Bix, B. (2012). Scott J. Shapiro, legality. *Ethics, 122*(2), 444–448.

Bix, B. (2015). Rules and normativity in law. In M. Araszkiewicz, P. Banas, T. Gizbert-Studnicki, & K. Pleszka (Eds.), *Problems of normativity, rules and rule-following*. Springer.

Bliss, R., & Trogdon, K. (2016). Metaphysical grounding. In Zalta, E. N. (Ed.), *The Stanford Encyclopedia of Philosophy*. https://plato.stanford.edu/archives/win2016/entries/grounding/.

Block, N., & Stalnaker, R. (1999). Conceptual analysis, dualism, and the explanatory gap. *Philosophical Review, 108*(1), 1–46.

Chilovi, S. (2020). Grounding-based formulations of legal positivism. *Philosophical Studies, 177*(11), 3283–3302.

Chilovi, S. (2021). Grounding entails supervenience. *Synthese, 198*(6), 1317–1334.

Chilovi, S., & Pavlakos, G. (2019). Law-determination as grounding: A common grounding framework for jurisprudence. *Legal Theory, 25*(1), 53–76.

Chilovi, S., & Pavlakos, G. (ms). The explanatory demands of grounding in law.

Coleman, J. L., & Leiter, B. (1996). Legal positivism. In D. M. Patterson (Ed.), *A companion to philosophy of law and legal theory*. Blackwell.

Correia, F., & Schnieder, B. (Eds.). (2012). *Metaphysical grounding: Understanding the structure of reality*. Cambridge: Cambridge University Press.

Dancy, J. (2004). *Ethics without principles*. Oxford: Oxford University Press.

Demiray, M. R. (2015). Natural law theory, legal positivism, and the normativity of law. *The European Legacy, 20*(8), 807–826.

Díaz-Leon, E. (2011). Reductive explanation, concepts, and a priori entailment. *Philosophical Studies, 155*(1), 99–116.

Dutilh Novaes, C. (2012). Reassessing logical hylomorphism and the demarcation of logical constants. *Synthese, 185*(3), 387–410.
Dworkin, R. (1986). *Law's empire*. Cambridge: Harvard University Press.
Enoch, D. (2011). *Taking Morality Seriously*. Cambridge: Oxford University Press.
Etchemendy, J. (1983). The doctrine of logic as form. *Linguistics and Philosophy, 6*(3), 319–334.
Fine, K. (2021). Truthmaking and the is—ought gap. *Synthese, 198*, 887–914.
Finnis, J. (2011a). Natural law: The classical tradition. In L. Coleman & S. J. Shapiro (Eds.), *The Oxford handbook of jurisprudence and philosophy of law*. Oxford: Oxford University Press.
Finnis, J. (2011b). *Natural law and natural rights*. London: Oxford University Press.
Gardner, J. (2001). Legal positivism: 5½ myths. *American Journal of Jurisprudence, 46*, 199–227.
Goldsworthy, J. (1990). The self-destruction of legal positivism. *Oxford Journal of Legal Studies, 10*(4), 449–486.
Gragl, P. (2017). In defence of Kelsenian Monism: Countering hart and Raz. *Jurisprudence, 8*(2), 287–318.
Green, L. (1999). Positivism and conventionalism. *Canadian Journal of Law and Jurisprudence, 12*, 35–52.
Green, L., & Adams, T. (2019). Legal positivism. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy archive*. https://plato.stanford.edu/archives/win2019/entries/legal-positivism/.
Greenberg, M. (2004). How facts make law. *Legal Theory, 10*(3), 2004.
Guest, S. (2012). GLOP, the moral aim of law and trusting judges. *Analysis, 72*(3), 1: 552-563.
Hanson, W. (1997). The concept of logical consequence. *The Philosophical Review, 106*(3), 365–409.
Harman, G. (1984). Logic and reasoning. *Synthese, 60*(1), 107–127.
Harrison, G. (2013). The moral supervenience thesis is not a conceptual truth. *Analysis, 73*(1), 62–68.
Hershovitz, S. (2014). The model of plans and the prospects for positivism. *Ethics, 125*, 152–181.
Holmes, Jr., O. W. (1881). *The common law*. Boston: Little, Brown.
Horty, R. (2004). The result model of precedent. *Legal Theory, 10*(1), 19–31.
Horty, R. (2011). Rules and reasons in the theory of precedent. *Legal Theory, 17*(1), 1–33.
Hume, D. (1978 [1740]). A treatise on human nature. In Bigge, L. A. S. & Nidditch, P. H. (Eds.), 2nd edn. Oxford: Oxford University Press.
Kelsen, H. (1934). *Reine Rechtslehre Einleitung in Die Rechtswissenschaftliche Problematik*. F. Deuticke.
Kelsen, H. (1967). *The pure theory of law* (2nd ed.). Clark: Lawbook Exchange.
Lange, M. (2009). *Laws and lawmakers*. Oxford: Oxford University Press.
Leary, S. (2017). Non-naturalism and normative necessities. In S. R. Landau (Ed.), *Oxford studies in metaethics* (Vol. 12, pp. 151–174). Oxford University Press.
Leuenberger, S. (2014). Grounding and necessity. *Inquiry, 57*(2), 151–174.
Lin, E. (2017). Against welfare subjectivism. *Noûs, 51*(2), 354–377.
Lycan, W. (1996). *Consciousness and experience*. Cambridge: MIT Press.
Maguire, B. (2017). The autonomy of ethics. In T. McPherson & D. Plunkett (Eds.), *The Routledge handbook of metaethics* (pp. 431–442). London: Routledge.
Marmor, A. (2009). *Social Conventions: From Language to Law*. Princeton University Press.
Marmor, A. (2010). *Philosophy of law*. Princeton: Princeton University Press.
Marmor, A. (2016). The pure theory of law. In Zalta, E. N. (Ed.), *The Stanford encyclopedia of philosophy*. https://plato.stanford.edu/archives/spr2016/entries/lawphil-theory/.
Marmor, A., & Sarch, A. (2019). The nature of law. In Zalta, E. N. (Ed.), *The Stanford encyclopedia of philosophy*. https://plato.stanford.edu/archives/fall2019/entries/lawphil-nature/.
McPherson, T. (2011). Against quietist normative realism. *Philosophical Studies, 154*(2), 223–240.
McPherson, T. (2019). Supervenience in ethics. In Zalta, E. N. (Ed.), *The Stanford encyclopedia of philosophy*. https://plato.stanford.edu/archives/win2019/entries/supervenience-ethics/.
Pigden, C. (1989). Logic and the autonomy of ethics. *Australasian Journal of Philosophy, 67*(2), 127–151.
Pigden, C. (1991). Naturalism. In P. Singe (Ed.), *A Companion to ethics* (pp. 421–431). London: Blackwell.
Pigden, C. (Ed.). (2010). *Hume on Is and Ought*. Palgrave Macmillan.
Pigden, C. (2016). Hume on is and ought: Logic, promises and the duke of wellington. In P. Russell (Ed.), *The Oxford handbook of David Hume* (pp. 401–415). Oxford: Oxford University Press.
Plunkett, D. (2012). A positivist route for explaining how facts make law. *Legal Theory, 18*, 139–207.

Plunkett, D., & Shapiro, S. (2017). Law, morality, and everything else: General Jurisprudence as a branch of metanormative inquiry. *Ethics, 128*, 37–68.
Pound, R. (1912). The scope and purpose of sociological jurisprudence. *Harvard Law Review, 25*, 489–516.
Prior, A. (1960). The autonomy of ethics. *Australasian Journal of Philosophy, 38*(3), 199–206.
Rachels, J. (2000). Naturalism. In H. LaFollette (Ed.), *The Blackwell guide to ethical theory.* London: Blackwell.
Raz, J. (1974). *'Kelsen's theory of the basic norm', reprinted in J. Raz.* Oxford: Clarendon Press.
Raz, J. (1981). The purity of the pure theory. *Revue Internationale de Philosophie, 35*(138), 441–459.
Raz, J. (1999). *Practical reason and norms* (2d ed.). Oxford: Oxford University Press.
Raz, J. (2009). *Between authority and interpretation: On the theory of law and practical reason*. Oxford: Oxford University Press.
Read, S. (1994). Formal and material consequence. *Journal of Philosophical Logic, 23*(3), 247–265.
Ridge, M. (2006). Ecumenical expressivism: Finessing Frege. *Ethics, 116*(2), 302–336.
Roberts, D. (2018). Why believe in normative supervenience? In R. Shafer-Landau (Ed.), *Oxford studies in metaethics* (Vol. 13). Oxford University Press.
Rosati, C. S. (1995). Naturalism, normativity, and the open question argument. *Noûs*, *29*(1), 46–70.
Rosati, C. (2016). Normativity and the planning theory of law. *Jurisprudence, 7*(2), 307–324.
Rosen, G. (2010). Metaphysical dependence: Grounding and reduction. In B. Hale & A. Hoffmann (Eds.), *Modality: metaphysics, logic, and epistemology* (pp. 109–136). Oxford: Oxford University Press.
Rosen, G. (2017). Metaphysical relations in metaethics. In T. McPherson & D. Plunkett (Eds.), *The Routledge handbook of metaethics.* London: Routledge.
Rosen, G. (2020). What is normative necessity? In M. Dumitru (Ed.), *Metaphysics, meaning, and modality: Themes from kit fine.* Oxford: Oxford University Press.
Russell, G. (2010). In defence of Hume's law. In C. Pigden (Ed.), *Hume on is and ought.* Palgrave: Macmillan.
Russell, G., & Restall, G. (2010). Barriers to implication. In C. Pigden (Ed.), *Hume on is and ought.* Palgrave: Macmillan.
Sagi, G. (2014). Models and logical consequence. *Journal of Philosophical Logic, 43*, 943–964.
Scanlon, T. (2017). Normative realism and ontology: Reply to Clarke-Doane, Rosen, and Enoch and McPherson. *Canadian Journal of Philosophy, 47*(6), 877–897.
Schaffer, J. (2016). Grounding in the image of causation. *Philosophical Studies, 173*, 49–100.
Schaffer, J. (2017). The ground between the gaps. *Philosophers' Imprint* 17.
Schroeder, M. (2015). *Expressing our attitudes*. Oxford: Oxford University Press.
Schurz, G. (1997). *The is-ought problem. An investigation in philosophical logic*. Berlin: Springer.
Shapiro, S. (1998). Logical consequence: Models and modality. In M. Schirn (Ed.), *The philosophy of mathematics today* (pp. 131–156). Oxford: Oxford University Press.
Shapiro, S. (2011). *Legality*. Cambridge: Harvard University Press.
Singer, D. (2015). Mind the is-ought gap. *Journal of Philosophy, 112*(4), 193–210.
Skiles, A. (2015). Against grounding necessitarianism. *Erkenntnis, 80*(4), 717–751.
Smith, M. (2017). Parfit's mistaken metaethics. In P. Singer (Ed.), *Does anything really matter? Essays on parfit on objectivity.* Oxford: Oxford University Press.
Sturgeon, N. (2009). Doubts about the supervenience of the evaluative. In R. Shafer-Landau (Ed.), *Oxford studies in metaethics* (Vol. 4, pp. 53–92). Oxford: Oxford University Press.
Taggart, C. (2013). How can 'positivism' account for legal adjudicative duty? *Oxford Journal of Legal Studies, 33*(1), 169–196.
Tarski, A. (1936). On the concept of logical consequence. In J. Corcoran (Ed.), *Logic, semantics, metamathematics* (pp. 409–420). London: Hackett.
Toh, K. (2008). An argument against the social fact thesis (and some additional preliminary steps towards a new conception of legal positivism). *Law and Philosophy, 27*(5), 445–504.
Toh, K. (2018). Plan-attitudes, plan-contents, and bootstrapping: Some thoughts on the planning theory of law. In J. Gardner, L. Green, & B. Leiter (Eds.), *Oxford studies in philosophy of law.* (Vol. 3). Oxford: Oxford University Press.
Trogdon, K. (2013). Grounding: Necessary or contingent? *Pacific Philosophical Quarterly, 94*, 465–485.
Tye, M. (1995). *Ten problems of consciousness: A representational theory of the phenomenal mind.* London: MIT Press.
Väyrynen, P. (2017). The supervenience challenge to non-naturalism. In T. McPherson & D. Plunkett (Eds.), *The Routledge handbook of metaethics.* London: Routledge.

Wodak, D. (2018). What does 'legal obligation' mean? *Pacific Philosophical Quarterly, 99*(4), 790–816.
Wodak, D. (2020). Who's on first? *Oxford Studies in Metaethics, 15*, 49–71.
Woods, J., & Maguire, B. (2017). Model theory Hume's Dictum, and the Priority of Ethical Theory. *Ergo, 4*, 419–440.