

## Martin Glazier

### Research Statement

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My work has focused on understanding necessity in terms of explanation. The notions of necessity and explanation might respectively be seen as fundamental to the world of the metaphysician and to that of the scientist. It is my hope that my work has gone some way toward bridging these worlds.

Philosophers since Kripke have observed a contrast between those forms of necessity that are genuine, such as metaphysical and natural necessity, and those that are not, such as epistemic and deontic necessity. For example, it might be epistemically necessary that Jones is not the burglar: after all, she is known to have been abroad at the time of the break-in. The necessity of this proposition, however, has been thought somehow less genuine than the *metaphysical* necessity that water is H<sub>2</sub>O. But little has been said about what this difference consists in. What is it for a form of necessity to be genuine? In ‘The Difference between Epistemic and Metaphysical Necessity’ I argue that the genuine forms of necessity are those that provide what I call ‘necessitarian’ explanation.

Such explanation has been recognized before. Lange, for instance, has observed, “That it is impossible to divide 23 evenly by 3 explains why no one has ever succeeded in figuring out a way to do so, no matter how much mathematics she knows.”<sup>1</sup> Or for a scientific example, van Fraassen has observed that ‘wood burns when heated, because wood must burn when heated.’<sup>2</sup> But what has not been appreciated is that this kind of explanation is provided by all and only the genuine forms of necessity. I contend that this is because to be genuine simply *is* to provide necessitarian explanation. The genuine forms of necessity are those that are capable of imposing constraints on the world in this way.

But how does necessitarian explanation work? In the case of metaphysical necessity, an intriguing possibility is that such explanation piggybacks on the kind of explanation provided by the essences or natures of things. (I intend to explore such piggybacking in future work.) Thus Lange’s example might be seen to piggyback on the fact that 23 is, by its very nature, not a multiple of 3, and that this aspect of its nature explains why such division has never occurred. I give an account of this latter kind of explanation in ‘Essentialist Explanation’. I argue that it is in a certain sense an ultimate form of explanation, and I suggest that this allows us to understand why such explanations can seem so satisfying. I further argue that, despite the temptations of several recent authors, such explanation cannot be understood in terms of the now-familiar notion of grounding explanation.

Essentialist explanation and grounding explanation come apart in another way as well, since only the latter is analogous to causal or scientific explanation. While causal explanation accounts for later events in terms of earlier events, grounding explanation accounts for less fundamental facts in terms of more fundamental facts. But how far can this analogy be pursued? Causal explanations typically appeal to laws of nature; should we therefore suppose that some grounding explanations appeal to ‘laws of metaphysics’? In ‘Laws and the Completeness of the Fundamental’ I argue that the answer is ‘yes’. I develop an account of such laws, and I show how they are crucial to the tenability of the familiar hierarchical picture of reality, on which the world as a whole is accounted for by what is fundamental.

I believe that the contrast between grounding and causal explanation on the one hand, and necessitarian and essentialist explanation on the other, can be seen to stem from a basic distinction between ‘determinative’ and ‘constraint-based’ forms of explanation. The former account for a fact by showing what determines it or ‘makes it the case’, while the latter account for a fact by showing how the world is constrained to be such that the fact obtains. I intend to develop this distinction further in future work.

Genuine necessity, then, is to be given an explanatory account. But what are the genuine forms of necessity? Philosophers have taken metaphysical necessity as a paradigm of genuineness. But what has not often been appreciated is that there are multiple metaphysical forms of necessity. In particular,

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<sup>1</sup>*Laws and Lawmakers*, p. 6.

<sup>2</sup>*Laws and Symmetry*, p. 28.

philosophers have overlooked three broadly perspectival distinctions between such forms. This family of distinctions corresponds to the familiar analogy between worlds, times and selves.

Consider, for instance, what time it is. It is the year 2018, but is it possible for it to be 1918, or 2118? In ‘What Time Is It in Other Possible Worlds?’ I argue that there is a metaphysical sense of possibility in which the answer is ‘yes’ and one in which it is ‘no’. On the one hand, it once *was* 1918, and since nothing impossible has ever happened, it must be *possible* for it to be 1918. But on the other hand, what is the case in 2018 is perfectly aligned with what is the case. Thus not only is it the case that there are smartphones in 2018, it is also the case that there are smartphones, and so on. This pattern is clearly no accident. But the pattern can obtain only if it is 2018, and so it must not be possible for it to be 1918. We therefore face a puzzle: it is both possible and impossible for it to be 1918. I argue that the puzzle can be resolved only by distinguishing between a ‘temporally proprial’ sense of possibility (from *proprius*, ‘own’), in which it could not be a time other than our own, and a ‘temporally nonproprial’ sense, in which it could.

A different form of propriality emerges when we consider who I am. I am Martin Glazier, but could I have been someone else? Philosophers from Williams to Nagel to Lewis have been tempted to answer ‘yes’. Thus Nagel has written, ‘So far as what I am essentially is concerned, it seems as if I just happen to be the publicly identifiable person TN—as if what I really am, this conscious subject, might just as well view the world from the perspective of a different person.’<sup>3</sup> And philosophers working on transformative experience, such as Paul, have thought that I could *become* someone else and so have presupposed the possibility of my *being* someone else. Yet it hardly seems accidental that I am Martin Glazier. In ‘Being Someone Else’ I argue that these considerations motivate a distinction between a ‘perspectivally proprial’ sense of metaphysical necessity, in which my identity is necessary, and a ‘perspectivally nonproprial’ sense, in which it is contingent.

I do not, of course, think there is any sense in which it is contingent that a given thing is self-identical. But following Nagel, we may instead understand the contingency of my being MG as the contingency of my having MG’s *perspective*. This notion of perspective is not the usual epistemic one: Nagel is not saying merely that I could have taken the world to be the way someone else takes it to be. Instead, we have here a distinctively metaphysical notion of perspective: the way the world is from a certain standpoint regardless of how one takes it to be. In ‘Being Someone Else’ I develop this notion of perspective from a philosophical point of view, and in ‘The Logic of Perspective’ I give it a formal underpinning, providing a system of axioms and a semantics and establishing soundness and completeness. I intend in future work to consider the reduction of perspective—that is, whether and how facts that involve perspective can be given a grounding explanation in terms of facts that do not.

I believe a third form of propriality emerges when we consider which world is actual. Trump actually won, but couldn’t this have been otherwise? Although standard modal logic answers ‘no’, it is hard not to feel a sense of contingency here. The two-dimensionalists famously addressed this concern by distinguishing two senses of necessity, one in which it is necessary that our world is actual and another in which this is contingent. Although this distinction has usually been understood in epistemic or semantic terms, I believe there is reason to view it as a distinction between two senses of *metaphysical* necessity, one ‘modally proprial’ and the other ‘modally nonproprial’. I am inclined to think this distinction is relevant to the problem of free will and determinism, since it is natural to think freedom requires the possibility both of *actually* performing some action and of *actually* refraining from performing it. The ‘alternate possibilities’ many have taken freedom to require therefore demand the recognition of the distinction. I have begun to develop these ideas in my presentation ‘The Necessity of Determinism’ and intend to do so further in future work.

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<sup>3</sup>*The View from Nowhere*, p. 60.