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Shepherd's Case for the Demonstrability of Causal Principles

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Shepherd's philosophy centers on her rejection of Hume's arguments against the demonstrability of causal principles. According to Shepherd, the causal maxim—*everything that begins to exist must have a cause*—is demonstratively true. She begins her first major philosophical work with a proof of this maxim. While scholars have complained that the proof seems blatantly circular, a closer look at Shepherd's texts and their Lockean background dispels this worry. Shepherd's premises are motivated not by the causal maxim or her theory of causation, but by a metaphysics that distinguishes between substances and affections and by an empirical understanding of a 'beginning of existence.'

Keywords: Shepherd; causal maxim; causation; beginning of existence; change; Hume

In '*An Essay Upon the Relation of Cause and Effect, Controverting the Doctrine of Mr. Hume concerning the Nature of That Relation*' (ERCE, 1824), Mary Shepherd (1777–1847) presents an incisive critique of Hume. Her central objection to Hume concerns the demonstrability of causal principles. Hume famously argues that causal principles cannot be demonstrated. Shepherd aims to prove the opposite. Specifically, according to Shepherd, the causal maxim—*everything that begins to exist must have a cause*—is demonstratively true. Both Hume and Shepherd's arguments are bold: as Hume notes in his discussion of the maxim, the default early modern position on the causal maxim is to treat it as self-evident,[1] "without any proof given or demanded" (T 1.3.3.1).[2]

1. For a discussion of philosophers who treat the maxim as self-evident and employ it in cosmological arguments, see Russell (2008: ch.10).

2. References to Hume's *A Treatise of Human Nature* (T) are to the 2007 edition by Mary J. Norton and David Fate Norton. Parenthetical citations provide book, part, section, and paragraph number.

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Shepherd's proof of the causal maxim turns out to be a central piece in her philosophical system, which she continues to develop after ERCE in *Essays on the Perception of an External Universe* (EPEU, 1827), "Lady Mary Shepherd's Metaphysics" (1832) and a number of other essays. Throughout these works, Shepherd shows that most human knowledge—including knowledge of the external world and personal identity, scientific knowledge, and even mathematical knowledge—is fundamentally rooted in knowledge of causal relations and of the causal maxim in particular. It is crucial for Shepherd that knowledge of the causal maxim is based on demonstration. Shepherd's main argument against Hume's associationism is that the demonstrative certainty of the causal maxim secures a rational foundation for all these areas of knowledge.

The goal of this paper is to clarify Shepherd's proof of the causal maxim. Roughly put, the proof is that a beginning of existence is an action, and thus, analytically, it entails an object that grounds it (ERCE 35–36).[3] Scholars have struggled to understand Shepherd's claim that a beginning of existence is an action as anything other than a question-begging move on her part (Fantl 2016). More recently, scholars have addressed this worry by highlighting the context of Shepherd's proof in her broader epistemology and philosophy of mind (Bolton 2010; 2019; Landy 2020a; Folescu 2022), but, even when this broader context is taken into consideration, Shepherd's premises are perplexing. We still need an explanation of the premises' justification.

I show that the justification becomes much clearer once we take into account two important features of the proof. First, throughout her various statements of the proof, Shepherd invokes a metaphysics of substances and affections; the proof is in fact an application of this metaphysics to the notion of a beginning of existence. Second, in several crucial passages, Shepherd indicates that her characterization of beginnings of existence aims to capture the experience of things that begin to exist, specifically, our experiences of change (EPEU 170–71);[4] these passages suggest that the justification for Shepherd's characterization of the concept is empirical. These two features of the proof allow us to see that, far from begging the question, Shepherd's premises are motivated by a metaphysics that distinguishes between substances and affections and by an empirical understanding of a 'beginning of existence.' My interpretation of Shepherd should be compelling not only because it is consistent with the text and allows us to make progress on the interpretive difficulties, but also because it is historically plausible: Shepherd's substance metaphysics and her appeal to experiences of

3. References to Shepherd's *Essay on the Relation of Cause and Effect* (ERCE) are to the original 1824 edition. Parenthetical citations provide page number.

4. References to Shepherd's *Essays on the Perception of an External Universe* (EPEU) are to the 2020 edition by Antonia LoLordo. Parenthetical citations provide page numbers from the original 1827 edition; these appear in the margins of LoLordo's edition.

change both have precedents in Locke, and Shepherd explicitly aligns her views with Locke in several places in ERCE (e.g., ERCE 37, 116–17, 127–29).[5]

I begin with a summary of Hume and Shepherd's arguments on the causal maxim (Section 1). I then review the scholarship on the circularity of Shepherd's proof (Section 2). In Section 3, I build my interpretation of the proof by clarifying the proof's structure (3.1), outlining the Lockean background (3.2), presenting evidence that the proof relies on substance metaphysics (3.3), raising additional problems (3.1, 3.3), and, finally, showing that Shepherd invokes experience as a source of justification for the premises (3.4). While Shepherd's proof is still riddled with difficulties, it is not nearly as flimsy as it is sometimes taken to be.

1. Shepherd's Proof of the Causal Maxim

As noted above, the key disagreement between Hume and Shepherd concerns the demonstrability of causal principles. Hume begins his analysis of causation in the *Treatise* by identifying three relations that he thinks constitute the idea of causation: contiguity in space and time, temporal priority of the cause to the effect, and necessary connection (T 1.3.2). Unable to explain the nature of necessary connection, he turns to two other questions in the hopes they will 'afford a hint' about it (T 1.3.2.12–13). First, why do we believe in the causal maxim? Second, what is the nature of the inference from cause to effect in particular cases? (T 1.3.2.13–15). His crucial next step is to argue that the causal maxim does not admit of demonstration (T 1.3.3.3). Accordingly, he argues that our inferences from cause to effect in particular cases depend on the principle of the uniformity of nature (i.e., that unobserved cases resemble observed cases); this principle, in turn, does not admit of demonstration (T 1.3.6.5). These negative conclusions on the demonstrability of causal principles pave the way for his famous thesis that *custom*, and not reason, is the basis of the belief in the causal maxim and all other causal relations (T 1.3.14.35, T 1.3.14.1). He then argues that the idea of necessary connection is the idea of the mind's determination to pass from one object to another (T 1.3.14.20–23).

In her summary of Hume's theory in the introductory chapter of ERCE, Shepherd singles out Hume's arguments against the demonstrability of the causal maxim and the uniformity of nature (ERCE 11–12, 14–15, 23). She identifies Hume's "material proposition" as the proposition that "nature may be conceived to alter her course, without a contradiction" and aims to refute it (ERCE 3, 18, 27–28). She argues and insists throughout the essay that the negation of the causal maxim (i.e., the notion that an object *can* begin to exist without a cause)

5. For discussion of Shepherd's alliance with Locke, see Lolordo (2020: 9; 2022: 33).

involves a contradiction (e.g., 35–36, 45, 58–59, 142–43). Thus, the causal maxim is demonstratively true. She then uses the causal maxim to demonstrate a second maxim, "a like cause must produce a like effect" (45). Shepherd argues that the negation of the "like cause . . ." maxim implies the negation of the causal maxim, and hence implies a contradiction (43–45). Thus, the "like cause . . ." maxim is also demonstratively true. It follows that the principle of the uniformity of nature is demonstratively true in at least this sense: when two objects are "precisely similar," their effects must also be precisely similar, on pain of contradiction (70–72). In this sense, "nature cannot be supposed to alter her course without a contradiction in terms" (27–28).[6]

It is worth emphasizing that, on Shepherd's account, the demonstrability of the causal maxim is the foundation for the demonstrability of all other causal claims. She notes that Hume's rejection of the demonstrability of the causal maxim is crucial to his arguments on causation both in the *Treatise* and in the *Enquiry*, despite the omission of the causal maxim in the *Enquiry*. Were Hume to grant that the causal maxim is demonstratively true, he could then use it as a "foundation" to demonstrate the uniformity of nature (19–20). Shepherd herself uses the causal maxim as such a foundation. Her account of causation begins with a demonstration of the causal maxim and proceeds to derive the "like cause . . ." maxim directly from it. She explicitly announces her theory's reliance on the causal maxim: immediately after demonstrating the maxim, she writes, "Before I proceed further, I wish my reader to grant the proposition, 'that a being cannot begin its existence of itself' . . . unless this step is allowed, I can make no further progress in this argument" (39).

Before turning to Shepherd's demonstration of the causal maxim, it is helpful first to review Hume's argument for the conclusion that the maxim does not admit of demonstration. Hume begins by observing that, in order for the causal maxim to be demonstratively true, its contrary (something can begin to exist without a cause) must be impossible (T 1.3.3.3). The idea of any cause is distinct from the idea of its effect. The imagination—the mind's capacity to entertain ideas other than memories[7]—can easily separate any two ideas it finds to be distinct. More simply put, whenever two things are distinct, we can imagine one without the other. Thus, the imagination can easily separate the idea of a cause from that of its effect, and vice versa; it can think of either object existing or

6. For a recent discussion of Shepherd's uniformity principle and her account of inductive inferences, see Tanner (2022).

7. Hume uses 'imagination' in two senses: "When I oppose the imagination to the memory, I mean the faculty, by which we form our fainter ideas. When I oppose it to reason, I mean the same faculty, excluding only our demonstrative and probable reasonings. When I oppose it to neither, 'tis indifferent whether it be taken in the larger or more limited sense, or at least the context will sufficiently explain the meaning" (T 1.3.9.19n22). The argument on the causal maxim seems to use 'imagination' in the broader sense.

beginning to exist without the other. Hume maintains as a general metaphysical principle that 'nothing of which we can form a clear and distinct idea is absurd and impossible' (T 1.1.7.6). Thus, an object beginning to exist alone without a cause is not impossible. Since the contrary of the causal maxim is possible, the causal maxim is not demonstratively true.

Shepherd's statement of the causal maxim follows Hume's statement of it: "*whatever begins to exist, must have a cause of existence*" (T 1.3.3.1); "every thing which begins to exist must have a cause" (ERCE 27). In fact, Shepherd makes a point of trying to see eye to eye with Hume on what exactly would constitute an 'object that begins to exist without a cause.' She notes that, in order to make sense of Hume's position, we must abstain from preconceiving this object as an 'effect' (32, 34), since an 'effect' requires a cause by definition. Hume himself makes a similar observation on the need to set aside the term 'effect' when judging the possibility of an uncaused beginning of existence (T 1.3.3.8). Instead, we must conceive of this object in abstraction from every feature other than its beginning to exist:

> Let the object which we suppose to begin its existence of itself be imagined, abstracted from the nature of all objects we are acquainted with, saving in its capacity for existence; let us suppose it to be *no effect*; there shall be no prevening circumstances whatever that affect it, nor any existence in the universe. (ERCE 34–35)

Shepherd then goes on to state her proof that the supposition of this object beginning to exist without a cause entails a contradiction:

> Let there be nought but a blank; and a mass of whatsoever can be supposed not to require a cause start forth into existence. . . . now, what is this starting forth, beginning, coming into existence, but an action, which is a quality of an object not yet in being, and so not possible to have its qualities determined, nevertheless exhibiting its qualities?
>
> If, indeed, it should be shown, that there is no proposition whatever taken as a ground on which to build an argument in this question, neither one conclusion nor another can be supported; and there need be no attempt at reasoning.—But, if my adversary allows that, no existence being supposed previously in the universe, existence, in order to be, must *begin to be*, and that the notion of *beginning an action* (the being that *begins* it not supposed yet in existence), involves a *contradiction in terms*; then this *beginning* to exist cannot appear but as a *capacity some nature hath* to alter the presupposed nonentity, and to act for itself, whilst itself is not in be-

> ing.—The original assumption may deny, as much as it pleases, all cause of existence; but, whilst in its very idea, the commencement of existence is an effect predicated of some supposed *cause*, (*because the quality of an object* which must be *in existence to possess it*,) we must conclude that *there is no object which begins to exist, but must owe its existence to some cause*. (ERCE 35–36)

Shepherd's proof is built on her specification of the idea of 'beginning to exist.' She claims that this idea is the idea of an *action*. In other passages where she recapitulates this proof, she claims that it is the idea of a *change* (ERCE 143; EPEU 170). I discuss some of these passages at length in 3.4. Note, however, that the shift from 'action' to 'change' does not affect the structure of Shepherd's proof. Both the ideas of action and change are ideas of *qualities*, and so it follows that the idea of a beginning of existence is the idea of a quality; it is this premise that is most crucial for Shepherd. As the idea of a quality, the idea of a beginning of existence necessarily entails an idea of an object that possesses or grounds the quality—an object that acts or changes. Thus, the idea of a beginning of existence necessarily entails an idea of an object in which this 'beginning to exist' takes place. Shepherd then notes that this object cannot be the object that comes into existence because, by stipulation, that object does not yet exist; thus, a beginning of existence entails the existence of an object *other than* the object that comes into existence—"some nature" that "alters the presupposed non-entity." Thus, it is a contradiction to suppose that an object begins to exist without another object that grounds its beginning of existence: the supposition amounts to attributing 'beginning of existence' to a non-existent object. The philosophical term for the object that 'alters the presupposed non-entity' is 'cause.' Although we abstained from preconceiving a beginning of existence as an effect for the sake of argument, upon further analysis we discover that "in its very idea, the commencement of existence is an effect predicated of some supposed *cause*." For ease of reference, here is a summary of the proof:

1. A beginning of existence is an action or change.
2. An action or change is a quality.
3. A quality entails an object that grounds the quality.
4. A beginning of existence entails an object that grounds it (from 1–3).
5. The object that grounds a beginning of existence must be an existent object.
6. A beginning of existence entails an existent object that grounds it, namely, a cause (from 4–5).[8]

8. This reconstruction is standard in the literature. See, e.g., Bolton (2010: 248–49; 2017; 2019: 134), Boyle (2018: 7), and Landy (2020a: 3).

2. The Charge of Circularity

The main challenge to Shepherd's proof is that the proof appears circular. Jeremy Fantl observes:

> Why suppose that beginning to exist is an action of an object at all? For an object to begin to exist it need only be the case that at one time there is no such object in the universe while at the next moment the object is present. Shepherd will worry that such a change needs to be caused. But that's the conclusion of her argument. . . . It's not clear why the moving of the universe from a state of lacking such an object to having such an object requires the action of any object—the object itself or any other. (2016: 98)

Fantl takes issue with two assumptions in Shepherd: the assumption that a beginning of existence is an action and the assumption that a change is a quality that requires a cause. In response to the first assumption, Fantl observes that a beginning of existence can be construed simply as a change in the universe from the absence of an object to its presence. In response to the second, Fantl notes that Shepherd cannot assume that a change of this sort requires a cause, because this assumption is "the conclusion of her argument." Fantl thus suggests that the proof is circular. Scholars have interpreted Fantl's objection as a charge of circularity or begging the question (e.g., Folescu 2022: 479; Landy 2020a: 3). Martha Bolton (2017) remarks that the assumption that a beginning of existence is an action "assumes what the argument is meant to prove" (note, however, that Bolton ultimately defends Shepherd against this charge of circularity [2010; 2019]).[9]

Fantl's objection is especially intuitive from a Humean perspective. Hume characterizes the idea of an object *beginning to exist* as the idea of the non-existence of the object followed by its existence (T 1.3.3.3). Earlier in the Treatise, Hume had characterized the idea of an object's *existence* simpliciter as nothing other than the very idea of the object. When we think of an object as existing, Hume argues, we simply think of the object—we do not think of anything over and above it (T 1.2.6.4). Thus, all that is required to think of an object beginning to exist is to think of a state *without* the object followed by a state *with* the object. Given the minimal requirements Hume posits, Shepherd's premise that the idea of beginning to exist involves a "starting forth", an action, or a change seems unmotivated.

9. Paoletti seems to have a similar assessment of Shepherd's proof. Paoletti notes that Shepherd "aimed to demonstrate that causality has a thoroughly rational explanation" (2011: 50) but "as a matter of fact, Shepherd did not demonstrate that cause and effect are necessarily connected; she rather took a deterministic view of physical phenomena for granted" (2011: 51).

One response to this objection, proposed by Martha Bolton and David Landy, is to emphasize that Shepherd's disagreement with Hume is rooted in fundamental philosophical differences between them (Bolton 2010; 2019; Landy 2020a). Shepherd is not committed to the basic assumptions that underpin Hume's argument against the demonstrability of the maxim. Hume's argument is itself laden with questionable assumptions—here, Bolton and Landy point to Hume's theory of intentionality, and Bolton also notes his assumption that a beginning of existence and its cause are successive (Bolton 2019: 133, 136; Landy 2020a: 8). Each of these assumptions is a critical point of disagreement between Hume and Shepherd. If so, as Bolton puts it, "there is no more reason to charge Shepherd's counter argument with circularity than to make the same charge against Hume" (Bolton 2019: 136). In addition, given the widespread tendency in early modern philosophy to view the causal maxim as intuitively or demonstratively certain, it is Hume, not Shepherd, that has the burden of proof in this disagreement (Lolordo 2022: 7).

This response might be effective in giving Shepherd a refutation of Hume's argument against the demonstrability of the causal maxim.[10] However, Shepherd's aim in the opening chapter of ERCE is not only to refute Hume's argument but to prove that the causal maxim is demonstratively true. Fantl's objection targets the positive aim most directly: if the premises in Shepherd's proof beg the question, Shepherd has not succeeded in proving that the maxim is demonstratively true, notwithstanding her ability to refute Hume's argument. The current response to Fantl does not resolve this worry. We can still ask, what is the justification for Shepherd's positive claims that a beginning of existence is an action or change and that action and change are qualities?

10. I am not convinced that Shepherd's refutation of Hume, as interpreted in the literature, is successful. It is questionable that Hume's argument against the demonstrability of the causal maxim relies as heavily on the successiveness and intentionality assumptions as the literature suggests. Throughout the *Treatise*, Hume frequently employs an inference from the *distinctness* of two things to their conceptual *separability*, and from their conceptual separability to the lack of a necessary connection between them, that is, to the possibility of one existing without the other (e.g., T 1.3.6.1, T 1.4.5.5, T 1.4.6.3). This inference is what does all the work in Hume's argument against the demonstrability of the causal maxim: an object beginning to exist is *distinct* from its cause, and so it is *separable* from that cause, and so an object beginning to exist does not necessitate a cause (T 1.3.3.3). Thus construed, Hume's argument relies most crucially on the *distinctness* between a beginning of existence and its cause—not on their successiveness. Hume's inference from *distinctness* to *separability* to *no necessary connection* also had a life of its own outside Hume's philosophical system and his theory of intentionality. As is well known, Hume inherits the aforementioned inference from Malebranche, who, in turn, likely inherits it from Autrecourt and al-Ghazâlî (Nadler 1996: 448–49; Lennon 1985: 286). In each of these thinkers, one finds the same inference from *distinctness* to *separability* to *no necessary connection*. Stephen Nadler argues that the 'no necessary connection' argument is "fundamentally the same" throughout this historical trajectory (1996: 450). It is worth noting that Malebranche's theory of intentionality, in particular, could not be further from Hume's. These historical considerations suggest that, for Shepherd, rejecting Hume's theory of intentionality is not enough for rejecting his argument against necessary connections between a cause and its effect.

Bolton and Landy suggest that Shepherd's proof is more plausible once we approach it from the perspective of her own theory of intentionality. They stress that for Shepherd causal relations are already built into the content of immediate sense perception (Bolton 2010: 245; Bolton 2019: 138; Landy 2020a: 12).[11] As will be evident in what follows, my interpretation of the proof is closely aligned with this proposal. It is not clear to me, however, that Bolton and Landy explain how Shepherd's theory of intentionality justifies the specific premises in the proof.[12] Even if Shepherd holds that our knowledge of the causal maxim is already built into the content of sense perception, she nonetheless aims to *demonstrate* the maxim (e.g., ERCE 27, 35–36, 83). If so, we are back to the question of how that demonstration is supposed to work—how its premises are justified.

A second response, by M. Folescu, accepts that Shepherd's proof of the causal maxim is, in a sense, circular, but maintains that the circularity is not vicious because Shepherd's aim is not to demonstratively prove the maxim but to show that the maxim is an axiom—a self-evident, foundational principle not in need of demonstration, on a par with the axioms of logic and mathematics (Folescu 2022: 474, 477, 481). On this reading, Shepherd's proof is an *indirect proof*: a type of proof used not to justify a principle but to test whether it is an axiom. If the principle is an axiom, the proof allows its self-evidence to "shine through" (485). Since the proof is not justificatory, the apparent circularity is no longer a threat to its cogency.

This interpretation has the advantage of strengthening Shepherd's philosophical system by giving its most foundational principle the status of an axiom, thereby obviating the difficulties that any proof of the principle inevitably faces. Yet, it is not clear that the interpretation is consistent with the text. Shepherd does not describe the causal maxim as an axiom, at least not explicitly,[13] and, in contrast, she frequently suggests that the causal maxim admits of demonstration.[14] She explicitly states that the contrary of the maxim is a contradiction (e.g., ERCE 35–36, 45, 58–59, 142–43) and specifies what the contradiction is in

11. Landy (2022) offers an especially clear explanation of this point. Shepherd views perception as a mental faculty that integrates or "blends together" (EPEU 67) the contributions of the senses and reason. When we perceive any object—for instance, when we look at a tree or hear a bell—what we perceive is an amalgam of sensory qualities (supplied by the senses) and causal relations (supplied by reason). Crucially, even though we can analyze our perceptions and distinguish between the contributions of the senses and reason, what we are most immediately acquainted with is perception; in fact, we are acquainted with the senses and reason only by subsequently analyzing our perceptions.

12. Landy's defense of Shepherd's proof focuses on showing how Shepherd might block Humean objections to her premises by rejecting Hume's theory of intentionality (2020a: 13).

13. Folescu's interpretation is an account of what Shepherd "should have" said (474, 480, 482, 487).

14. See passages cited in Folescu (2022: 476, 477–78). See also passages cited in Section 1 of this paper.

her proof of the maxim (ERCE 35–36). I doubt that we can interpret Shepherd's argument that the negation of the maxim is a contradiction, including the explanation of what the contradiction is, as something other than a demonstrative justificatory proof of the maxim.

Here, one might defend the proposed interpretation by reference to a passage in which Shepherd states that the notion of an object beginning its own existence involves an "intuitive contradiction" (EPEU 14). It has been suggested that, given Shepherd's alliance with Locke, Shepherd is likely relying on a Lockean sense of 'intuition' (the perception of the truth of a proposition immediately, without intermediary reasoning steps), in contrast to 'demonstration' (the perception of the truth of a proposition via inference or intermediary reasoning steps) (Folescu 2022: 477; Lolordo 2022: 7). Scholars have read the passage as indicating that the negation of the causal maxim is an *intuitive* contradiction—a contradiction that does not require demonstration via intermediary steps (Folescu 2022: 477; Lolordo 2022: 7). But this proposal conflicts with Shepherd's specification of precisely such intermediary steps in her proof of the maxim: namely, that a beginning of existence is an action, that an action is a quality, and that a quality is a quality of an existent object. In addition, Locke himself offers a demonstration of the causal maxim (in his sense of 'demonstration,' i.e., coming to know something via intermediary reasoning steps), and one that bears a striking resemblance to Shepherd's:

> But *every thing that has a beginning must have a cause,* is a true principle of reason, or a proposition certainly true; which **we come to know** by the same way, i.e. by contemplating our ideas, and perceiving that the idea of *beginning to be*, is necessarily connected with the idea of *some operation*; and the idea of *operation*, with the idea of *something operating*, which we call a cause; and so the beginning to be, is perceived to agree with the idea of a cause, as is expressed in the proposition: and thus it comes to be a certain proposition; and so may be called a *principle of reason*, as every true proposition is to him, that perceives the certainty of it. (1697: 135–136, boldface mine)[15]

Shepherd's alliance with Locke and her ostensibly Lockean proof of the maxim more strongly suggest that, like Locke, she sees the maxim as demonstratively rather than intuitively true. In EPEU 14, Shepherd claims that the negation of the maxim '**involves**' an "intuitive contradiction"—a contraction can be derived from the negation—not that the negation in and of itself is an intuitive contradiction.

15. This proof appears in Locke's letter to the Bishop of Worcester, published in 1697 and again in 1824, the year ERCE was published.

It is also worth noting that, even if we were to grant that Shepherd's proof of the maxim is non-justificatory, it is still puzzling what Shepherd's premises in the proof amount to: how are these premises intuitive? How do they allow the truth of the causal maxim to "shine through"?

A more recent response to Fantl's objection, by Jessica Wilson, delves deeper into the contradiction that Shepherd claims to have uncovered in the proof. On this interpretation, the contradiction is that something could come from nothing, or that a beginning of existence could take place in a completely empty universe. Shepherd's proof, on this reading, does not depend on the claims that a beginning of existence is an action and that an action is a quality of an object; the proof needs only the premise that a beginning of existence is "any kind of happening" (Wilson 2022: 155). Provided we grant this premise, a contradiction arises in supposing that there could be any kind of happening in a completely empty universe: "how could there be a happening (action, event) without something existent to perform or constitute the happening?" (Wilson 2022: 155).

Unlike the previous responses, this response aims to give Shepherd a positive and demonstrative proof of the causal maxim. I believe that, in this way, it is closer to the declared aims of ERCE. However, I am not convinced that it ultimately resolves Fantl's worry. Fantl's worry is that a beginning of existence could be construed simply as a state without an object (an empty universe, even) followed by the presence of the object. The present interpretation seems to grant that a beginning of existence can be construed this minimally—at least insofar as such a sequence of states is a kind of 'happening.' But, if so, what constitutes a beginning of existence is the sequence of these two states. It is still not clear why such a sequence of states requires something other than itself to constitute it. In other words, even if it is a contradiction for an empty universe to contain *within itself* a beginning of existence, it is not a contradiction for an empty universe to be *followed by* a non-empty one. Fantl's objection is that a beginning of existence amounts to the 'empty to not-empty' sequence, without a need for the empty universe as such to contain within itself a beginning of existence.

In light of these difficulties, I believe Fantl's circularity challenge has not been satisfactorily answered in the literature.

3. Shepherd's Proof Revisited

3.1. Preliminary Notes

In what follows, I propose a new response to Fantl by developing the following theses on Shepherd's proof: first, the proof is an application of substance metaphysics to the concept of a beginning of existence (3.3); second, the justification

for the premises is empirical (3.4). By way of showing that this interpretation is historically plausible, I also note that the views I am attributing to Shepherd have precedents in Locke (3.2).

Before turning to these points, I want to make two features of Shepherd's proof more explicit. First, Shepherd's proof is an analytic argument. The proof aims to show that the causal maxim is an analytic statement: the very concept of a beginning of existence entails that this beginning of existence has a cause; as Shepherd puts it, "**in its very idea**, the commencement of existence is an effect predicated of some supposed cause" (ERCE 36, boldface mine). Thus, Shepherd focuses on unpacking the concept of a beginning of existence: a beginning of existence is an action or change, therefore a quality, therefore dependent on something of which it is the quality. Each of these premises is intended as an analytic statement. It is this analytic structure that lends the proof the appearance of circularity: it seems that that to adopt Shepherd's specific characterization of a beginning of existence is to assume already that a beginning of existence has a cause. The circularity is not inevitable, however. Suppose that Shepherd's characterization turned out to be not an ad-hoc construction, but an independently plausible understanding of the notion. If so, the argument would be analytic but not circular, in the same way that Hume's argument that compatibilism follows from the definitions of 'liberty' and 'necessity' is analytic but not circular.[16]

Second, at the point in *ERCE* where she presents the proof, Shepherd has not yet addressed the question of what the nature of *cause* is. Her understanding of cause at this point in *ERCE* is broad: it allows for the possibility that the relation between an object and its qualities is a causal relation, or, in other words, that the object can be said to be the cause of its qualities. She seems to understand cause as the conditions that ground something or make it possible. This broad understanding of cause is incongruous with a mechanistic understanding of cause, where causes are temporally antecedent to their effects, but at this point in the essay Shepherd has not yet ruled out the mechanistic account. She is adopting a broader sense of cause, one that reflects the similarly broad Aristotelian understanding of cause,[17] as well as other similarly broad understandings of cause in the early modern period.[18]

16. See Hume's Enquiry Section 8, "Of Liberty and Necessity."

17. In *Physics* Book II chapter 3, Aristotle describes 'cause' as the '*why*' of an object. The breadth of Aristotle's sense of 'cause' is clear in his understanding of matter, form, and end as causes. Translations of Aristotle are from Aristotle (1957).

18. For instance, Spinoza understands 'cause' broadly as 'reason:' "For every thing a cause or reason must be assigned either for its existence or for its non-existence" (1677/2006: *Ethics* Ip11p2; see also Garrett 2018: 34). A similar broad use of 'cause' is Clarke's statement of the causal maxim, "Whatever exists, has a cause, a reason, a ground of its existence, a foundation on which its existence relies, a ground or reason why it does exist rather than not exist" (1705/1998: 8).

Later in ERCE, Shepherd explicitly rejects the mechanistic understanding of cause by arguing that causation is a synchronic relation. Take a process like burning a log or digesting a meal (ERCE 51–52, 57). Shepherd acknowledges that these processes occur in time; however, she argues that causation and necessary connection are relations that hold synchronically *within* time slices of those processes, not diachronically across them (ERCE 49–50, 57, 141). While this thesis plays a central role in her overall theory of causation, we should keep in mind that it is not a premise in her proof of the maxim. It is the other way around: the causal maxim is a premise in her argument for the synchronicity thesis.[19] For the purposes of interpretation, however, we can derive one important insight from the synchronicity thesis. When Shepherd establishes that every beginning of existence has a cause, she is not establishing the temporal antecedency of this cause to the beginning of existence. The synchronicity thesis tells us that the cause of the beginning of existence is not anything temporally prior to it. Shepherd ultimately allows that there can be a beginning of existence without a cause *antecedent to it*—this claim turns out to be trivially true for her once she establishes that causes are never antecedent to their effects. A beginning of existence has only a concurrent cause. Surprisingly, the causal maxim in and of itself does not seem to rule out the possibility that an object could simply exist in a moment of time with no links whatsoever to past and future objects, but only to concurrent objects;[20] and, in fact, Shepherd's philosophical system might not ultimately rule this out.[21] Here, Shepherd's view begins to approach the Humean mosaic,

19. For a possible reconstruction of this argument, see Bolton (2010: 244), Boyle (2020: 95), and Lolordo (2022: 9).

20. Fantl sees it as a problem for Shepherd that her view of causation as synchronous implies that 'there is complete **causal** discontinuity between each moment and the next' (Fantl 2016: 99, boldface mine). However, while this implication certainly goes against our standard diachronic view of causation, it is not clear to me why it is problematic. Shepherd is deliberately challenging the diachronic view. Fantl claims that Shepherd herself wants to avoid this implication; he cites as evidence Shepherd's stipulation that the objects that form a cause (e.g., fire and wood) are temporally antecedent to their union (ERCE 49, 57). However, it seems to me that Shepherd can consistently maintain *some* principles of temporal continuity (i.e., that objects are temporally prior to their unions) without thereby invoking or committing herself to *causal* continuity across moments in time.

21. One of Shepherd's most sustained objections against Hume is that Hume thinks the possibility of anomalies like hot snow mean that the causal relation is not necessary, but really such anomalies only show that the *underlying causes* of objects as we experience them *can* at least in principle be different from one moment to the next (ERCE 66–71). In other words, an object that we sense can in principle be *wholly unlike* any objects that we have sensed prior to it, as long as the underlying *synchronic* cause of the object is similarly new so as to explain the existence of the object. Shepherd argues that miracles (in the sense of "an exception to nature's **apparent** course" [EPEU 335]) are possible because there can be "latent influences . . . new unseen events . . . 'secret powers' . . . drawn from the mysterious storehouse of unperceived nature to alter our experience in the future" (EPEU 331). She allows that an object or event can break with all precedent as long as "there is a cause equivalent to the change," such as "an interference of God as a cause" (ERCE

at least with respect to the parts of time. An interpretive question arises: does Shepherd account for any connections *across* moments of time?[22] Do beginnings of existence have any connections to past and future objects? I do not have the space to adequately resolve these issues in this paper, but I believe my interpretation in what follows offers a promising lead.

3.2. Two Lockean Themes

My interpretation of Shepherd finds two Lockean themes in her proof of the maxim, an appeal to substance metaphysics and an appeal to an empirical source for the idea of causation. It is worth taking note of these Lockean views before continuing.

In its most basic form, substance metaphysics is a distinction between two kinds of existents: on the one hand, *objects* or *things* like apples, tables, and birds; on the other, *qualities* or *modifications* like greenness, squareness, and flying. The difference is that greenness exists only as a quality *of an object*, and so depends on the object for its existence; the same cannot be said about an apple. In other words, greenness is always predicated of something else, whereas an apple need not be. Existents of the first sort go by the label of 'substance,' while those of the second sort go by the label of 'affection,' 'accident,' or 'mode.'[23]

Locke's account of substance has been debated extensively. Yet, it is indisputable that he regards the basic substance-affection taxonomy as a foundational and ineliminable part of his philosophical system. Ideas of substances and affections are basic categories of complex ideas (*Essay* II.xii.3). Some of our ideas are crucially ideas of "things subsisting by themselves" (Essay II.xii.6), while others "contain not in them the supposition of subsisting by themselves, but are considered as dependencies on or affections of substances" (Essay II.xii.4). Ideas of substances (e.g., apples) are not only "combinations of simple ideas [e.g., greenness]" but involve, crucially, the idea of a "substratum" in which the simple ideas subsist (Essay II.xii.6, II.xxiii.1). A notoriously challenging aspect of Locke's theory of substance is that, while he insists we cannot help but suppose

79). This possibility seems to imply that, while any object we sense must have a synchronic cause that explains its existence, it need not be connected to anything diachronically.

22. Bolton (2019: 137) and Landy (2020b: 6) observe that for Shepherd objects transition and move over time; it is on account of these motions and transitions that objects are able to combine, and, upon combining, produce effects concurrently with the combination. It is not clear to me, however, how these transitions and motions constitute links across moments of time.

23. The most well-known source for the distinction is Aristotle's *Categories* and *Metaphysics*. Many early modern philosophers, including Descartes, Spinoza, and Leibniz, in addition to Locke, also held the distinction. For a brief historical survey, see Robinson (2021).

the existence of this substratum, he also insists that we "are perfectly ignorant" of its nature: the substratum is something we "know not what;" "the supposed, but unknown support of those qualities, we find existing, which we imagine cannot subsist, "*sine re substante*", without something to support them" (II.xxiii.2).[24]

The substratum of a substance bears the substance's powers, and the idea of power is in fact a "principal ingredient" in the idea of any substance (II.xxi.3). Locke's account of the idea of power is no less controversial than his account of the idea of substance. For our purposes, what is most significant is that Locke traces this idea back to experience:

> The mind being every day informed, by the senses, of the alteration of those simple ideas it observes in things without, and taking notice how one comes to an end, and ceases to be, and another begins to exist, which was not before; reflecting also on what passes within himself, and observing a constant change of its ideas . . . and concluding from what it has so constantly observed to have been, that the like changes will for the future be made in the same things by like agents, and by the like ways; considers in one thing the possibility of having any of its simple ideas changed, and in another the possibility of making that change: and so comes by that idea which we call power. (Essay II.xxi.1)

The experience at the root of the idea of power is the experience of 'alteration,' 'change,' 'ceasing to be,' and 'beginning to exist,' as, for instance, when we watch fire melt a piece of gold, or the sun blanch a piece of wax (*Essay* II.xxi.1). Locke also posits this experience as the origin of the related idea of cause and effect (*Essay* II.xxvi.1). Locke's views on the exact character of this experience are ambiguous, but scholars have argued that the experience is *not* an experience simply of one thing succeeding another, as Hume would have it, but of a distinct empirical datum, namely, action or change.[25] It seems plausible that Locke also has this experience in mind in his proof of the causal maxim in his letter to the Bishop of Worcester, discussed earlier, where he argues that "the idea of beginning to be, is necessarily connected with the idea of some operation; and the idea of operation, with the idea of something operating, which we call a cause" (1697: 135). The passages from the *Essay* indicate that "the idea of beginning to be" derives from the experiences just described.

24. In some passages in the *Essay*, Locke seems to dismiss the philosophical value of the substance-mode taxonomy (e.g., II.xiii.19–20). As Millican (2015) argues, however, these passages indicate not that he rejects the taxonomy, but that he condemns the common Cartesian view that the idea of substance is clear and distinct (2015: 13).

25. See, e.g., Lolordo (2021: 223), Jacovides (2003: 341, 344).

It is a thorny question how exactly, on Locke's view, these experiences lead the mind to "come by" the idea of power.[26] I cannot delve into this question here. What I want to propose is that Shepherd is picking up on Locke's attempt to derive the idea of a beginning of existence and the proof of the causal maxim from these experiences. A crucial move in her attempt, and one that Locke does not seem to employ, at least not as explicitly, is the application of substance metaphysics to the idea of a beginning of existence. Ultimately, Shepherd uses the same empirical data as Locke to argue that beginnings of existences are affections, and, as such, they cannot exist by themselves, but depend on a substance for their existence.

3.3. Shepherd's Appeal to Substance Metaphysics

To begin to understand the justification for Shepherd's premises, it is important to pay close attention to her invocation of substance metaphysics. Here, I am following Bolton's observation that Shepherd's proof "depends largely on the thesis that things that begin to exist are in the category of qualities" (2010: 248) and that her theory of causation "is an adaptation of the Aristotelian ontology of substances and accidents" (2010: 247). Bolton does not develop these points further, but I believe they merit further development, especially in relation to the question of how Shepherd's premises are justified.

There is significant textual evidence that Shepherd, like Locke before her, has a substance metaphysics, and that it in fact plays a crucial role in her proof of the maxim. Consider Shepherd's formulation of her proof in the following passages:

> A beginning of existence is "*the quality of an object* which must be *in existence to possess it*." (ERCE 35–36)

> The action of beginning any existence would therefore appear as a quality of *self*, or the *accident* of a continuing existence; and it would be a manifest contradiction, to predicate of such a quality its self-existence. (EPEU xiii)

> The *beginning* of every thing is but a change of that which is already in existence. . . . *Changes* therefore require beings already in existence, of which they are the affections or qualities. (EPEU 170–71)

26. For a discussion of this issue, see Jacovides (2003).

> *If any particular quality were supposed to begin of itself*, the following contradiction would arise, viz. that the beginning of existence, which is a quality of being, could belong to a being not yet in existence. (EPEU 290)

As the language of 'quality,' 'accident,' and 'affection' indicates, Shepherd's strategy in the proof is to place beginnings of existence in the aforementioned category of *affection*. She does so by describing beginnings of existence as 'actions' and 'changes'; the upshot of these descriptions, and what is most crucial to the proof, is the claim that beginnings of existence are affections. Shepherd is saying that beginnings of existence have the same ontological status as features like greenness, squareness, and flying. In other words, beginnings of existence are not self-standing states of affairs (in the way apples, tables, and birds are) but states of affairs that we attribute to objects (in the same way we attribute actions and qualities to objects). As affections, beginnings of existence ontologically depend on something else for their existence. Another name for this 'something' is 'cause', on the broad understanding of 'cause' previously outlined. Shepherd thus derives the causal maxim from an application of substance metaphysics to the notion of a beginning of existence. She is saying that, due to the kind of existent that it is, a beginning of existence requires something else in existence to ground it.

Shepherd invokes substance metaphysics not only in her proof of the maxim, but in her subsequent analysis of causation. She goes on to explain the idea of necessary connection as the idea of an inherence relation: "necessary connection of cause and effect is the obligation qualities have to inhere in their objects" (ERCE 63); "every effect is inherent, or contained in its cause" (ERCE 42 footnote 44); "these properties and qualities cannot be after itself [i.e., the substance]; but are *necessarily* connected *with*, because *inhering* in it" (ERCE 162). As is clear from her usage, 'inherence' refers to the metaphysical dependence of qualities on the objects that possess them, or, more generally, the metaphysical dependence of affections on substances.

My attribution of a substance metaphysics to Shepherd might seem problematic given a common interpretation in the literature that Shepherd has a 'bundle' theory of objects.[27] On this interpretation, Shepherd views objects as nothing but bundles or collections of qualities. If objects are *nothing but* bundles of qualities—if they do not involve *also* a substance that bears the qualities—then Shepherd cannot hold that qualities require substances that bear them. The textual support for the bundle interpretation consists mainly of the following passages:

27. Fantl claims that for Shepherd objects are "masses of combined qualities" (2016: 95) and qualities 'inhere' in objects in the sense of inhering in *bundles* (2016: 95 fn. 9). Fantl thus seems to suggest that for Shepherd objects are nothing but bundles, i.e., they do not involve substances. Similarly, Landy claims that, for Shepherd, "an object just is a bundle of qualities" (2020b: 3).

> Objects in relation to us, are nothing but masses of certain qualities, affecting certain of our senses; and which, when independent of our senses, are *unknown* powers or qualities in nature. (ERCE 46)

> An *object* may be defined, a *combined mass of qualities*; the result of proportional unknown circumstances in nature, meeting with the human senses. (*ERCE* 64)

David Landy presents additional textual support for the bundle interpretation in "Is Shepherd a Bundle Theorist?" (in press). Landy notes, however, that such passages must be interpreted in tandem with other passages in which Shepherd grounds "qualities" in something underlying them. Balancing the textual considerations, Landy answers the titular question in the negative. I agree with Landy that the bundle interpretation is ultimately inconsistent with the text. Shepherd's statements of her proof for the causal maxim, cited above, clearly indicate that she sees qualities as ontologically dependent on something underlying them for their existence; lest an infinite regress ensues, an object cannot be "nothing but" qualities, but must involve also a bearer of qualities, namely, a substance. In light of such passages, it is more plausible to interpret the passages where Shepherd *seems* to hold a bundle view to mean not that objects are *just* bundles of qualities but that objects *as we sense them* (i.e., "in relation to us") are just bundles of qualities.[28] She is saying that we know objects only by knowing their qualities. This stance is consistent with her repeated claims that qualities must inhere in substances; it is just that, as per Locke's view of substance, the substances that bear the qualities are "secret" and "unknown" to us (ERCE 46, 64; EPEU 45, 304–5).[29]

The interpretation that Shepherd is applying substance metaphysics to the concept of a beginning of existence allows us to make progress on two fronts. First, we begin to see a way out of the charge of circularity. The proof is that

28. It is also not clear to me that Shepherd's 'mass' is equivalent to a mere bundle or collection, that is, that a 'mass' is devoid of substance in the way a mere bundle or collection is. The Oxford English Dictionary lists 'a coherent body of matter' as a common meaning of 'mass'; on this usage, a mass is not obviously substanceless.

29. Some scholars have observed that for Shepherd mind and matter are not substances, but powers or capacities (see, e.g., Lolordo 2020: 16–17; Boyle 2020: 101). It might seem that in identifying mind and matter with powers or capacities Shepherd is doing away with the concept of substance altogether. However, as Lolordo notes, even if mind and matter are powers, "it is not the case, for Shepherd, that the powers that constitute mind and matter exist without any being or subject to which those powers may be attributed" (Lolordo suggests that this being or subject is ultimately God) (2020: 17). Boyle also notes that "this capacity [i.e., mind] presumably inheres in something, but . . . we cannot know the essence of the stuff in which the capacity that is mind inheres" (2020: 101). In short, identifying mind and matter with powers is not tantamount to denying the existence of substances or the need for affections to inhere in substances.

a beginning of existence is an affection, and, as such, necessarily depends on something (a cause) for its existence. Crucially, Shepherd's motivation for the premise that beginnings of existence are affections is not the causal maxim but a metaphysics that categorizes what exists into substances and affections; on this taxonomy, beginnings of existence seem to fall naturally in the category of affection. Second, we can see why Shepherd is demonstrating the maxim in the Lockean sense of 'demonstration:' she is using substance metaphysics as an intermediary step between the concept of a beginning of existence and the conclusion that a beginning of existence necessarily has a cause.

Still, Fantl's objection stands. Why should we think of a beginning of existence as an affection, when we could think of it simply as a sequence of states—a state *without* the object followed by a state *with* the object? More generally, why should we accept the substance-affection taxonomy? Here, it is worth noting that Hume rejects the substance-affection taxonomy on the same grounds that he rejects necessary causal connections. He argues that the definition of substance, "*something which may exist by itself*", "agrees to every thing, that can possibly be conceiv'd; and never will serve to distinguish substance from accident" (T 1.4.5.5). The reason anything at all satisfies the definition of substance is that anything can be distinguished, and thus separated, from other things; thus, anything can be conceived as 'existing by itself', and, if so, it is possible for anything to exist by itself (T 1.4.5.5). Hume also argues that greenness, squareness, and flying do not have a distinct ontological status but are abstractions or 'distinctions of reason' (T 1.1.7.17). We never have ideas of greenness, squareness, and flying per se; rather, we have ideas of green apples, square tables, and flying birds. Hume would say that the idea of a beginning of existence is a similar sort of abstraction. In short, at least from a Humean perspective, the substance-affection taxonomy is not any safer as an assumption than the causal maxim itself.

Even if we grant the substance-affection taxonomy and the premise that a beginning of existence is an affection, a problem arises: Shepherd wants to rule out the possibility that an object, say, a fire, could "begin its own existence" (ERCE 39, 45, 56, 94, 193), but the substance-affection taxonomy establishes only that a beginning of existence must be grounded in *some* substance—why could this substance not be the very entity (the fire) that begins to exist? Shepherd attempts to preempt this objection in the proof: the substance that grounds a beginning of existence, she tells us, "must be in existence to possess it" (ERCE 36); thus, the beginning of existence of a fire must be grounded in something other than the fire because the fire does not yet exist. But the objection can be pressed: why couldn't the beginning of existence of a fire be co-extensive with the fire in its first moment of existence? At one moment, neither the fire nor its beginning of existence exist; at the next, the fire exists alongside its beginning

of existence. The beginning of existence is grounded in some object, but this object is none other than the fire, and so the fire can still be said to begin its own existence. Shepherd seems to assume that a beginning of existence is not the first moment of something's existence, but rather a state prior to that moment, but it is not clear she can help herself to this assumption. What is worse, the assumption threatens an infinite regress: if *everything's* first moment of existence is preceded by a beginning of existence, the first moment of a beginning of existence itself is preceded by a beginning of existence, *ad infinitum*.

In sum, the substance metaphysics interpretation still leaves us with three interpretive questions. First, what is Shepherd's justification for the claim that a beginning of existence is an affection? Second, what is the justification for the assumption that a beginning of existence must inhere in an object other than the object that begins to exist? Third, and returning to an earlier question (3.1), how (if at all) does Shepherd account for connections across moments of time, such as the connection between a beginning of existence and the objects that precede it in time?

3.4. Shepherd's Appeal to Empirical Justification

The issues just raised certainly make the substance metaphysics interpretation seem unattractive. It is not clear that Shepherd stands to gain much by appealing to substance metaphysics, and, on the contrary, she might be opening a can of worms. Yet, I do not think the interpretation can be set aside. As we saw, Shepherd's statements of her proof across ERCE and EPEU repeatedly and unambiguously appeal to the relation of metaphysical dependence of affections on substances.

How, then, might Shepherd respond to the difficulties raised? Recall that Locke associates the idea of a beginning of existence with sensory and reflective experiences of 'alteration', 'change', 'ceasing to be' and 'beginning to exist' (Essay II.xxi.1). While Shepherd's statement of the proof in ERCE 35–36 leaves the justification of the premises ambiguous, other passages indicate that experience is what justifies her understanding of beginnings of existence:

> . . . let us bear in mind the reasoning already adduced in the foregoing Chapter, and it thence immediately follows, that objects which **we know by our senses** do begin their existences, and by our reason know they cannot begin it of themselves, must begin it by the operation of some *other beings* in existence, producing these new qualities in nature, and introducing them to our observation. (ERCE 43, boldface mine)

> All that ***experience*** has to do, is to show us, by what passes within ourselves, that there is a *contradiction* in the supposition of *qualities beginning their own existence*. (ERCE 143, boldface mine)

The following passage from EPEU is especially revealing:

> That class of ideas which Dr. Reid terms instinctive, and Mr. D. Stewart considers as composed of simple ideas not *formed* by the senses, but generated upon certain *fit occasions* for their production, I consider to be the conclusions of a latent reasoning [footnote 1]; as the mere results and corollaries, included in the relation of those ideas and sensations already existing in the mind, and which were previously formed by the senses. The idea is very soon learned, *that it is a contradiction to suppose things to BEGIN of themselves*; for this idea is occasioned by **the impression, (the observation,) that the *beginning* of every thing is but a change of that which is already in existence,** and so is not the same idea, (the same quality,) as the *beginning of being*, which is independent of previous being and its changes. The two ideas are therefore *contrary* to each other; and the meanest understanding perceives them to be so, as easily as it perceives that white is not black, &c. *Changes* therefore require beings already in existence, of which they are the affections or qualities; and children, peasants, and brutes know and perceive these relations, though they cannot analyse them [footnote 2]. The mind therefore taking notice of changes, refers them to the objects of which they are the qualities.
>
> Footnote 1: Since writing the above, I find M. Destutt de Tracy of my opinion.
>
> Footnote 2: M. D. de Tracy considers children as capable of perceiving a relation between two ideas, as of their original perception. (EPEU 170–71, boldface mine)

Shepherd begins the passage by contrasting her view on the causal maxim with Reid's and Stewart's. Both Reid and Stewart hold that the causal maxim is an axiom or "first principle" not admitting of demonstration.[30] In contrast, Shepherd claims, the maxim is a "conclusion" of "a latent reasoning." Shepherd unpacks the 'latent reasoning' as a sequence of mental states: first, "the senses" form certain "ideas and sensations;" second, the mind perceives certain 'rela-

30. For Reid's account of 'first principles,' see Reid 1785, Essay IV. For Reid's view on the causal maxim, see, e.g., Reid 1785, Essay VI Chapter VI, 618–20; for Stewart's, see Stewart (1793: 158).

tions' between these ideas and sensations; third, reason draws out "results and corollaries, included in the relation." The causal maxim is one of these "results." In footnotes 1 and 2, Shepherd aligns her view with Destutt de Tracy's, specifically, Destutt de Tracy's view that the perception of certain relations is, as Shepherd puts it, "original."[31] 'Original' here means irreducible: Shepherd is saying that the perception of certain relations is a brute or irreducible empirical datum; it cannot be explained in terms of other mental operations.[32]

It is important to highlight the distinction between the mind's perception of relations in the second step of the process and its perception of relations in the third step. In the second step, the mind perceives certain relations *without* the use of reason; the perception of these relations is 'original.' In the third step, the mind perceives the "results and corollaries" that it has derived from those relations using reason. We do not notice this process—it is "latent." Instead, what we notice is always an amalgam of the senses and reason "acting in concert when any object affects the senses" (EPEU 67). Our sensory experience nonetheless can be broken down or 'analysed' into two kinds of representation: representations that involve the use of reason and representations that do not (EPEU 67). As Shepherd emphasizes throughout ERCE, the representation of the causal maxim involves the use of reason; in contrast, the representation of a beginning of existence does not. The passage in ERCE 43 makes this contrast apparent: ". . . objects which we know **by our senses** do begin their existences, and **by our reason** know they cannot begin it of themselves, must begin it by the operation of some *other beings* in existence." It is precisely because it is derived from other representations using reason that the causal maxim admits of demonstration in the Lockean sense of 'demonstration.'

More precisely, the latent reasoning behind our knowledge of the causal maxim begins with "the **impression**, (the **observation**,) that the *beginning* of every thing is but a change of that which is already in existence." 'Impression' here refers to sensory experience.[33] Like Locke before her, Shepherd is suggesting that the concept of a beginning of existence has empirical content. Our expe-

31. According to Destutt de Tracy, the perception of relations between sensations is as brute a mental operation as sensation itself: "as soon as we feel two sensations distinctly, it follows naturally enough that we **feel** their resemblances, their differences, and their connections" / "Dès qu'on sent distinctement deux sensations, il s'ensuit assez naturellement qu'on sent leurs ressemblances, leurs différences, et leurs liaisons" (1801: 57, boldface mine). Lolordo's edition of EPEU provided me with this source.

32. See, e.g., the Oxford English Dictionary entry for 'original,' 5b: "not deriving from or depending on any other thing of the kind; inherent; independent." Hume often uses 'original' in this sense; see, e.g., T 0.8, T 1.1.4.6, T 2.1.3.3, and T 2.1.5.3–4. See also Shepherd EPEU 222–23.

33. Shepherd generally uses "impression" in the context of describing the deliverances of the senses (see, e.g., EPEU 58, 63, 160, 316, 321, 345). Earlier in the passage, she indicates the latent reasoning sequence begins with the senses.

riences of things beginning to exist are always experiences of *transformations* in objects. To experience a fire, plant, or butterfly begin to exist is to experience a *change* in something already in existence. We experience beginnings of existence not as sequences of the absence of an object followed by its presence, but as a continuously existing object (a log, seed, or caterpillar) *changing*. In other words, we experience both a continuously existing object (e.g., the log) and a change or beginning of existence (the beginning of existence of the fire) as something that happens *in* the log and thus depends on the log for its existence. The concept of a beginning of existence has such experiences as its content. It is these experiences that provide the justification for Shepherd's premise that a beginning of existence is a change and, as such, an affection.

We might also compare Shepherd's view to Aristotle's. Like Shepherd and Locke, Aristotle is committed to the causal maxim: "nothing can 'come to be,' in the absolute sense, out of the non-existent" (*Physics* I.VIII.191b). In maintaining the maxim, he is sympathetic to the Parmenidean metaphysical puzzle of how something could come out of nothing: "what it comes out of must be there for it to come out of" (*Physics* I.VIII.191a). Yet, prior to mentioning the metaphysical puzzle, and independently of it, Aristotle appeals to examples from the natural world to show that every beginning of existence is a change of something already in existence—examples like the growth of a plant, the birth of an animal, the sculpting of a statue, or the building of a house (*Physics* I.VII.190b). On the basis of these examples Aristotle concludes that "in every case there is something already there, out of which the resultant thing comes"; "all the processes that result in anything 'coming to exist' in this absolute sense start with some subject that is already there to undergo the process" (*Physics* I.VII.190b). Aristotle is not stating these facts as contingent empirical truths. He is not saying that as a matter of fact everything that we observe to 'come into existence' is a change in an underlying subject. Rather, he is stating these facts by way of analyzing the concept of something 'coming into existence.' He is saying that the concept is the concept of an object changing, and he justifies this analysis by reference to experience. Shepherd's appeal to "the **impression**, (the **observation**,) that the *beginning* of every thing is but a change of that which is already in existence" invokes the same justification.

To be clear, what the "impression" in question represents is an *unknown* substance that undergoes change. Recall that Shepherd holds that, although we refer the changes to the substance, the substance itself remains "secret" and "unknown" to us (ERCE 46, 64; EPEU 45, 304–5). In addition, the impression represents this datum *without* the use of reason. Shepherd is tracing back the latent reasoning process that gives rise to the perception of the causal maxim to an 'original' representation. Finally, although this original representation is a representation of a substance that exists continuously (i.e., a substance that is

"already in existence"), it is not a representation of a substance that continues to exist *when not present to the senses*, or that has a mind-independent or external existence. As Shepherd explains in EPEU chapters 1–3, these other representations involve reason, and, specifically, reason's application of the causal maxim to sensations. What prompts the reasoning toward the causal maxim is not the representation of a physical object, but the representation of change and of an unknown bearer of the change.

I believe that, in fact, Hume would concede the point that we normally experience beginnings of existence not as successions of discrete states but as changes in things that bear the change. In his account of the belief in the external world, Hume draws a distinction between the way philosophers understand experience and the way ordinary people (i.e., the 'vulgar,' which includes all of us [T 1.4.2.36]) experience the world. Ordinary people do not experience the world in the way philosophers would describe the experience (i.e., as a mere sequence of unconnected snapshots); rather they experience tables, stones, hats, fires—objects that have identity over time and change over time (T 1.4.2.31, T 1.4.2.43, T 1.4.2.46). Given this account of our ordinary experience, Hume might grant that our experience of a fire beginning to exist does not represent simply an absence of fire followed by its presence, but an underlying subject changing. Yet, Hume would have a problem with Shepherd's strategy of demonstrating the causal maxim on the basis of this representation. Where he would disagree with Shepherd is on the epistemic status of the representation. Hume explains the representations of substance and identity as the product of 'fictions of the imagination' (T 1.1.6.2, T 1.4.2.36, T 1.4.2.42–43). The ordinary concept of a beginning of existence as I have described it would be an additional offshoot of these fictions. In contrast, for Shepherd, our notion of change as transformation in an underlying unknown substance is an 'original' empirical datum not reducible to imaginative or associative mechanisms. It is here that, as Bolton and Landy observe, Hume and Shepherd's theories of intentionality inform their arguments on the causal maxim. Shepherd has a theory of intentionality where our sensory experiences immediately represent objects undergoing changes; Hume has a theory where that representation comes about only via imaginative fictions.

It is certainly controversial to claim that the notion of change as an affection of a continuously existing substance is an irreducible empirical datum. This issue demands further discussion than I am able to give it in this paper, but I think Shepherd might be able to defend her stance by noting the challenges of a reductionist approach. Hume's own attempts to explain how a mere succession of fleeting unconnected impressions can give rise first to the notion of an object's endurance in time (T 1.2.5.29) and only then to the notion of identity (T 1.4.2.29) have frequently seemed strained to scholars. Against the backdrop of

such attempts, Shepherd might be warranted in assuming that the notion evades a reductionist explanation.

Going back to the passage at EPEU 170–71, the first stage in the mind's "latent" 'learning' of the causal maxim is the "impression" that "the *beginning* of every thing is but a change of that which is already in existence." The second stage is the mind's perception of the contrariety between this idea and the idea of "the *beginning of being*, which is independent of previous being and its changes." The mind perceives this contrariety "as easily as it perceives that white is not black." Reason then derives, as a conclusion that is "included" in the contrariety, the maxim "that it is a contradiction to suppose things to BEGIN of themselves." In other words, since the concept of the beginning of existence of an object is the concept of an already-existing object changing, it is a contradiction for an object to begin to exist 'independently of previous being and its changes.'

Thus understood, the passage suggests tentative solutions to the worries summarized at the end of Section 3.2. First, as I have shown above, it suggests that the justification for understanding beginnings of existence as affections is empirical. Shepherd would grant that one can in principle postulate the notion of a sequence of states—a state without an object followed by a state with the object—but such a notion is not the concept of a beginning of existence. The concept of a beginning of existence has empirical content; it corresponds to experiences like seeing a fire, plant, or butterfly begin to exist. It would be a gross oversimplification to say that these experiences represent merely an object "nonexistent this moment and existent the next"; a more accurate description of their contents is that they represent objects changing.

Second, the justification for Shepherd's assumption that a beginning of existence is not co-extensive with the first moment of an object's existence is also empirical. Beginnings of existence as we observe them are temporal processes. They are stretched over a period of time. Over this period, an existent object is transformed into a new object. The transformation is an affection of an underlying substance, but the substance cannot be the new object, at least not all the way from the start, because at the start of the process the new object does not yet exist. Think again of a fire beginning to exist: when a fire is just beginning to exist, for instance, when heat is traveling through the log, its beginning of existence is an affection not of the fire, but of other existing objects like the log, fuel, and oxygen. Shepherd need not be committed to a sweeping metaphysical principle that everything that exists be preceded by a beginning of its existence. The beginning of existence of the fire need not itself be preceded by a beginning of its existence, ad infinitum. She is saying, rather, that those objects that *do* 'begin to exist' in the empirical sense of the term (objects like plants, fires, and butterflies) do so *not* co-extensively with the first moment of their existence but prior to that moment.

Third, the passage at EPEU 170–71 also suggests an answer to the question of how Shepherd accounts for connections across moments of time, specifically, the connection between a beginning of existence and the objects that precede it. As I have argued, the passage suggests that our experiences of beginnings of existence represent change as an affection of an underlying substance, and that the content of these experiences is an irreducible empirical datum. But this representation just is a representation of a connection across moments of time, namely, the identity of the underlying substance over time. If so, experience (including the experience of a beginning of existence) represents connections across moments of time by representing relations of identity. In watching a fire begin to exist, we represent *both* the synchronic relation of an affection inhering in a substance in a moment of time *and* the diachronic relation of the identity of the substance over time. The cause of a beginning of existence is synchronic with it—it is the substance in which the beginning of existence inheres—but this cause or substance bears relations of identity to earlier and later substances. It is on account of the identity that the beginning of existence of the fire is *not* "independent of previous being and its changes." Thus, at a given moment, a beginning of existence is non-causally connected to earlier and later objects in virtue of the diachronic identity of its cause.

I do not pretend to have fully resolved the difficulties plaguing Shepherd's appeal to substance metaphysics in her proof of the causal maxim. However, I hope to have shown that Shepherd does not blindly assume that beginnings of existence are affections but instead grounds this claim on the experience of change. I also hope to have shown that her premises are much more cogent once we take into consideration their empirical underpinnings.

4. Conclusion

I have argued that Shepherd's assumptions about beginnings of existence in her proof of the causal maxim do not beg the question. When the broader textual and historical context of these assumptions is taken into consideration, it becomes clear that the motivation behind them is much more sophisticated. The starting point for the proof is the experience of a beginning of existence. This experience represents "a change of that which is already in existence" (EPEU 170–71). It is this empirical datum—the datum of change as an affection of an underlying substance—that is motivating Shepherd's premises in the proof. If so, the justification for the premises is not the causal maxim or her analysis of causation, as has been suggested in the literature, but a metaphysical understanding of the empirical datum of change.

I doubt that my version of Shepherd's proof would be compelling to the Humean. I am only suggesting that it is precisely on this understanding of the experience of change, riddled though it is with concepts that Hume deems to be 'fictions,' that Shepherd's case against Hume most crucially depends.

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