Husserl and the reduction of modality to essence

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Abstract

Although Husserl's theory of essence has recently emerged as historically important, it has not been deemed useful to contemporary essentialism. Many essentialists nowadays propose to reduce metaphysical modality to the essences of things. They are accordingly tasked with explaining why essence generates modality in the required way. It is widely believed, however, that Husserl has a modal account of essence and is thus unable to contribute to such a project. Against this consensus, I show that Husserl's theory of essence contains resources for safeguarding a promising recent proposal to meet this explanatory challenge, viz., the proposal to model essence in terms of *generalized identity* and to establish its necessity by appeal to the necessity of identity. Recently, Jessica Leech (2021) has challenged this proposal on grounds that, because identity inherits its necessity from the *logical* necessity of self-identity, it collapses the necessity of essence into logical necessity. To this extent, it appears to make the latter do all the work in accounting for metaphysical necessity, obviating the need for an essentialist account of modality in the first place. I argue that Husserl has something approaching an account of essence as generalized identity and that his account contains resources for defusing Leech's challenge. If I am right, then Husserl's essentialism, when combined with certain Husserl-independent theoretical commitments, offers a live and potentially fruitful resource for the contemporary project of reducing metaphysical modality to essence.

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Since the recent explosion of interest in the concept of essence, Husserl has been gaining recognition as a historically important contributor to the topic. Despite this, little consideration has been given to whether his contributions have useful applications to the contemporary metaphysics of essence and modality. A primary reason for this neglect is that standardly, Husserl is taken to have a reductive account of essence in terms of metaphysical necessity, yet modal accounts of essence are now widely discredited in the wake of counterexamples from Fine (1994). Indeed, many contemporary essentialists, working under the aegis of Kit Fine and Bob Hale, hold that modal accounts have things backwards: it is the alethic necessities, such as metaphysical and logical necessity, that have their sources in the essences of things. It is accordingly presumed that Husserl's theory is archaic and cannot make any substantive contribution to current debates about the relation of essence to modality.

My aim in this paper is to break this mold in two ways. The first is historical: to show that Husserl has a reductive account of modality in terms of essence, a point that Husserl scholars have generally denied. The second is philosophical: to show that Husserl's essentialism offers, along with independent ideology, the conceptual resources with which to safeguard essentialist accounts of modality against a serious recent challenge. The challenge is this. Essentialists about metaphysical modality incur the task of explaining *why* essential truths should give rise to metaphysically necessary ones. A promising new approach to defending essentialism about modality, due to Fabrice Correia and Alex Skiles, offers a straightforward way to do this. Essential truths are understood as statements of *generalized identity*, and as such they inherit the necessity of identity. However, in a recent article, Leech (2021) has raised a problem for this attempt to obtain necessity from essence via identity, viz., that it relies on a modification of the Barcan-Kripke proof of the necessity of identity from the necessity of self-identity. In doing so, it derives the necessity of essential truths from a *logical* necessity. Consequently, given the Finean-Halean view that all alethic necessity, including logical necessity, reduces to essence, Correia and Skiles' identity-based proposal amounts to the viciously circular derivation of the necessity of essence in general from a necessity sourced in the essences of a specific type of logical entity. On the other hand, if one discards the view that logical necessity reduces to essence, then their proposal collapses the necessity of essence into a necessity not sourced in the essence of anything. In that case, it deprives essence of any role in accounting for metaphysical necessity. In either case, essentialism about modality is rendered a non-starter.

The plan is as follows. In §1, I unpack in more detail the project of reducing metaphysical modality to essence, the proposal to do so via the generalized identity account of essence, and Leech's challenge to this proposal. §2 then outlines Husserl's suggestion that all metaphysical necessities have their source in the essences of *universals* and that these essences are given in propositions about generalized identities between the instantiation of one universal and the instantiation of a plurality of others. On the basis of Husserl's pregnant but undeveloped remarks on these topics, I then reconstruct, in §§3–4, a largely Husserl-inspired line of argument that such generalized identity propositions about universals are sufficient to generate metaphysical necessities. In §3 I use Husserl's notion of a formal-ontological truth to argue for the view that properties are individuated descriptively, as opposed to primitively or

'quidditistically', as a matter of formal-ontological necessity, which I show to be distinct from metaphysical necessity. In §4 I show that from this conclusion and Leibniz' Law, it follows that generalized identity propositions about universals are metaphysically necessary, and that therefore essential truths are able to ground metaphysically necessary truths. I show, moreover, that the premises of the argument I reconstruct are independently plausible and thus of interest to anyone who takes ETM seriously, not only to Husserl scholars. If my account is tenable, it spells out a theory on which (i) essence reduces to generalized identity; (ii) the necessity of generalized identity propositions is grounded in the *non-modal* fact that their constituents are universals; and therefore (iii) the necessity of generalized identity is established without problematic recourse to the logical necessity of self-identity.[1] In §5 I briefly consider and respond to some potential misgivings with my proposed Husserlian account. My conclusion is not that the account is superior to all rivals, but, more modestly, that if you are independently attracted to universals and to an account of modality in terms of essence-as-generalized identity, then the Husserlian framework, in conjunction with some plausible extra-Husserlian principles, offers a novel and formidable means of defending the latter by means of the former. To this extent, I contend, Husserl's theory of essence constitutes a live and potentially fruitful option for contemporary essentialists.

1 Essence, necessity, identity

1.1 Essence to necessity?

Following Leech (2021), let 'the essentialist theory of modality' (ETM) refer to any reductive account of metaphysical modality in terms of essence. Standardly, ETMs core thesis is a definition of metaphysical necessity:

(ETM□) It is metaphysically necessary that *p* if, and if so then because, it is true in virtue of the essence of something that *p*.

The corresponding definition of metaphysical possibility is then derived from (ETM□) via negation:

(ETM◊) It is metaphysically possible that *p* if, and if so then because, it is not true in virtue of the essence of anything that ¬*p*.

Other types of alethic modality are in turn defined via specific restrictions on the domain of essence-bearers. For example, logical modality is defined in terms of the essences of logical concepts, mathematical modality in terms of the essences

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[1] Note that Correia and Skiles take generalized identities to be statements, not propositions. Husserl, in contrast, holds that propositions, not statements, are the primary truth-bearers. Accordingly, here and throughout I use 'proposition'-talk when cashing Husserl's account but otherwise use 'statement'-talk. I assume the two are interchangeable for present purposes.

of mathematica (numbers and/or sets, e.g.), and so on (see Fine, 1994: 9–10). ETM has seen an eruption of interest from philosophers since its original proposal in Fine (1994, 1995a), finding articulation in the works of Hale (2002, 2013),Correia (2006, 2012),Rosen (2006), and Kment (2014), *inter alia*.

But if ETM is to be tractable, essential truths had better themselves be metaphysically necessary—if, for example, triangles are essentially three-sided, then they should be necessarily three-sided. For if essential truths were to lack the modal features possessed by necessary truths, the latter would, by Leibniz' Law, be distinct from the former, in which case metaphysical necessity could hardly be *defined in terms of* essence. Facts about essences must therefore be able to 'generate' facts about what is metaphysically necessary in the sense that the existence of any of the former is sufficient to account for the existence of the latter. This raises a challenge to proponents of ETM to explain *why* essential truths should generate metaphysical necessities. Why should we endorse what Mackie (2020): 3) calls the Necessity Principle (NP)?

> (NP) If being (an) *F* is an essential property of *x*, then being (an) *F* is a necessary property of *x*.[2]

To some, (NP) might seem obviously true given a longstanding association of essence with metaphysical necessity. The challenge, however, is precisely to say *why* (NP) seems obvious. After all, the standard association of essence and necessity can plausibly be chalked up to the prevalence of *identifications* of the two for much of the twentieth century and throughout the history of philosophy. Yet such modal accounts of essence are precisely what proponents of ETM reject. One might explain the putative obviousness of (NP) by claiming that it is merely an analytic truth grounded in the meaning of 'essence'. But doing so would seem to be tantamount to defining essences as a class of necessities, and thus to endorsing some version of the modal account.[3] To vindicate ETM, essentialists must provide substantive reasons to believe that essential truths must be metaphysically necessary. Yet a growing number of philosophers, such as Leech (2018, 2020), Romero (2019), Mackie (2020), and Wildman (2021), are skeptical as to whether any such reasons are forthcoming.

It is important to note that, as Leech points out, the challenge to provide a rational basis for (NP) menaces regardless of how strong one intends ETM to be (Leech 2020: 890). In its strongest form, ETM proposes to reduce to necessity to essence understood as a non-modal feature of entities, and the corresponding to challenge is to specify how a non-modal feature generates a modal one. More weakly, ETM might propose to reduce necessity to essence understood as a modal feature that nonetheless differs from necessity in some significant way. The corresponding challenge is then to specify how a modal feature different from necessity generates necessity. More weakly still, ETM might simply propose to reduce necessity in general to a base

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[2] Cited in Leech (2021): 889

[3] Moreover, as Leech points out, many philosophers, herself included, do not find (NP) immediately compelling, and such philosophers are clearly competent speakers of English and of the relevant metaphysical idiom (Leech, 2021: 891).

class of necessities which concern the natures of things. The corresponding challenge is then to establish that there are necessities concerning the natures of things. My remarks in these pages concern the strongest version of ETM, but they apply *a fortiori* to the weaker two.

A natural attempt to establish (NP) turns on a characterization of essences in terms of the *identities* of their bearers: a thing's essence is a collection of properties (or propositions ascribing such properties) having which is the same as being that thing. For example,

> [F]or the purposes of achieving fit, we may identify the being or essence of *x* with the collection of propositions that are true in virtue of its identity. (or with the corresponding collection of essential properties). (Fine, 1995b: 275)

> The nature (or essence or identity) of a thing is simply what it is to be that thing. It is what distinguishes that thing from every other thing. (Hale Bob, 2013: 151)

The suggestion is that truths grounded in what things are must be metaphysically necessary because they are falsified only by (allegedly absurd) situations in which things are not the things they are. As Hale summarizes:

> I think that once it is granted … that we can intelligibly speak of a thing's nature, or identity, it must be agreed that truths about it are necessary. For the supposition that a thing might have had a different nature immediately raises an obvious problem. Let α be the thing in question, and let Φ be its nature—that is, $\Phi\alpha$ says what it is for α to be the thing it is. Then the supposition that α might have had a different nature is the supposition that it might not have been the case that $\Phi\alpha$, and might have been that $\Phi'\alpha$ instead. … This is equivalent to the suggestion that for some β, it might have been the case that $\beta=\alpha \wedge \neg\Phi\beta \wedge \Phi'\beta$. But how could this possibly be true? Given that $\Phi\alpha$ tells us what it is for α to be the thing it is, and that $\neg\Phi\beta$, β lacks what it takes to be that thing, it must be that $\beta\neq\alpha$. (Hale 2013: 133)

Leech points out, however, that this line of reasoning, far from meeting the challenge to defend (NP), merely serves to underscore it:

> Is what it is to be something also what it must be to be something? When the question is put this way, the answer does not appear to be obviously, or primitively, or analytically, 'yes'. 'Must' does not in general follow from 'is' without further argument. (Leech, 2021: 894)

The characterization of essences as 'what things are' is insufficiently developed to establish (NP) by itself. More needs to be said about the sense in which essences constitute the identities of things.

Essentialists sometimes yoke the idea of essences-as-identities to the Aristotelian notion of a 'real definition'. But it has been shown that there is nothing in the notion of a real definition by itself which licenses any modal inferences (Leech, 2018;

Mackie, 2020). For the rest of this paper, I will restrict my focus to a more literal construal of essences-as-identities, recently proposed by Correia and Skiles (2019) and criticized by Leech (2021): the account of essence in terms of *generalized identity*.

1.2 Essence as generalized identity

The notion of generalized identity has been subject to increasing attention in the last decade (see Rayo, 2013; Dorr, 2016; Correia & Skiles, 2019). The generalized identity operator, '≡', can be understood as an analogue to the '=' operator of first-order logic with identity which is flanked by statements and predicate expressions rather than by singular terms (Rayo, 2013). Paradigm generalized identity statements include:

$p \equiv q$ (For it to be the case that p is for it to be the case that q)

$Fx \equiv_x Gx$ (For a thing to be F is for it to be G)

$p \equiv_{x, y, \dots} q$ (For some things $x, y, \dots$ to be such that p is for them to be such that q) (Correia & Skiles, 2019: 644; quoted in; Leech, 2021: 898).

For example, 'Triangle$(x) \equiv_x$ Three-Sided$(x) \land$ Figure(x)' says that for x to be a triangle is for x to be a three-sided figure, and '∃xx(Giraffes$(xx)) \equiv_x$ ∃xx(Mammals$(xx)) \land \Psi$' says that for it to be the case that there are giraffes is for it to be the case that there are mammals and Ψ (for some proposition Ψ giving the remainder of the properties essential to being a giraffe).

In such statements, '≡', like '=', is reflexive, transitive, and symmetric. Furthermore, Correia and Skiles introduce an adaptation of Lebiniz' Law for generalized identity (I'll call it 'LL^{GEN}'). To this end they first introduce the piece of notation '$\Phi[q//p]$', such that, in their words,

$\Phi[q//p]$ results from sentence Φ by replacing one or more occurrences of p by q, with the condition that no variable that is free in $p \equiv_v q$ is bound in Φ or $\Phi[q//p]$. (Correia and Skiles 2019: 645)[4]

Thus, for example, given a statement of the form $p \equiv_v q$ and any arbitrary true statement Φ that includes p, every occurrence of p in Φ can be replaced with an occurrence of q, and '$\Phi[q//p]$' is the sentence resulting from this replacement. Thus if *Human*$(x) \equiv_x$*Rational*$(x) \land$ *Animal*(x) is a true generalized identity statement, and Φ is the true proposition that Socrates is a human and Trump is orange, then $\Phi[$*Rational*$(x) \land$ *Animal*$(x)//$*Human*$(x)]$ is the proposition that Socrates is rational and Socrates is an animal and Trump is orange. (LL^{GEN}) states the implication from the sentence-form $p \equiv_v q$ to the sentence-form $\Phi[q//p]$:

(LL^{GEN}) If $p \equiv_v q$ and Φ, then $\Phi[q//p]$

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[4] Citing Dorr (2016): 49.

Thus, for example, (LL$^{\text{GEN}}$) entails that if (a) for it to be the case that Socrates is a human is for it to be the case that Socrates is a rational animal, and (b) it is the case that Socrates is a human and Trump is orange, then it is the case that Socrates is a rational animal and Trump is orange.

Correia and Skiles propose an account of essence in terms of generalized identity.[5] This account uses the formal apparatus of generalized identity to model essential truths, yet it leaves open the metaphysical question as to whether the account should be taken as reducing essence to generalized identity (see Correia & Skiles, 2019: 654).[6] Here and throughout I'll assume a non-reductive account; nothing crucial for present purposes turns on this question. According to the Correia-Skiles account, generic essentialist statements, such as 'It is essential to being human that humans are rational animals', or 'Triangles, as such, are essentially three-sided', are generalized identity statements in their fully analyzed forms. Thus, the present examples reduce, respectively, to the statement that 'Human$(x) \equiv_x$ Rational$(x) \land$ Animal(x)' and the statement that 'Triangle$(x) \equiv_x$ Three-Sided(x)' (Correia & Skiles, 2019: 649). If a statement of the form $Gx \equiv_x Fx$ is true, then being F is the *full* essence of being G (what it is to be F is what it is to be G in full). If, on the other hand, a statement of the form $Gx \equiv_x Fx \land Hx$ gives the full generic essence of being G, then being F is in the *partial* essence of being G. For example, presumably to be Socrates is to be rational *among other things*—thus being rational is in the partial, not the full, essence of being Socrates. If $Gx \equiv_x Fx \land Hx$ gives the full generic essence of being G, then call '$Fx \sqsubseteq_x Gx$' a statement of *conjunctive part* which reads: 'Being F is part of what it is to be G' (Correia & Skiles, 2019: 651–2). 'To be Socrates is, in part, to be rational' is therefore one such statement of conjunctive part. Plausibly most statements of essence are statements of conjunctive part, and most of the examples in what follows will be such statements.

The details of the account of conjunctive parthood need not concern us here. The crucial feature of the present proposal for our purposes is that essential truths amount to identity statements of a certain type, statements with the same logical properties as statements formed by '='. This is important because identity statements are necessary. According to this account, then, essential truths are necessary in virtue of being a special type of identity statement. The account of essence in terms of generalized identity thus provides, it seems, a straightforward, elegant means of establishing (NP).

1.3 Leech's challenge

Recently, however, Leech (2021) has raised a powerful challenge to such an attempt to defend (NP).[7] To get a sense for how this challenge emerges, consider how phi-

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[5] It's important to note, though, that many proponents of ETM take essence to be irreducible and do not seek to establish its necessity by reducing it to anything further.

[6] Thanks to an anonymous reviewer for pointing this out to me.

[7] Leech's challenge is rich and nuanced, and here I summarize only its key moves.

losophers account for the necessity of identity. The most readily available answer is the Barcan-Kripke proof[8]:

(1) $\forall x \forall y ((x=y) \supset (Fx \supset Fy))$ Leibniz' Law
(2) $\forall x \Box (x=x)$ Necessity of self-identity
(3) $\forall x \forall y ((x=y) \supset (\Box(x=x) \supset \Box(x=y)))$ Instance of 1 from 2
(4) $\forall x \forall y ((x=y) \supset \Box(x=y))$ From 2, 3

Leech considers an adaptation of this deduction-pattern into the following proof of the necessity of generalized identity (Leech, 2021: 901):

(1) If $p \equiv q$ and Φ, then $\Phi[q//p]$ Leibniz' Law for $\equiv$
(2) $\Box(p \equiv p)$ Necessity of generalized self-identity
(3) $p \equiv p \supset (\Box(p \equiv p) \supset \Box(p \equiv q))$ Instance of 1 from 2
(4) $p \equiv q \supset \Box(p \equiv q)$ From 2, 3

Notice that these proofs work by deriving the necessity of identity/generalized identity from the necessity of (generalized) self-identity. As Leech puts it,

> One can understand the necessity of identity proof, in informal terms, as transferring the box from $\Box(p \equiv p)$ to $\Box(p \equiv q)$ on the condition that $p \equiv q$; hence the necessity attaching to the former is the same as the necessity attaching to the latter. (Leech, 2021: 905)

The motive for proving the necessity of generalized identity was to establish (NP) in support of ETM, the proposal that *all* (alethic) necessity reduces to essence. But if (NP) is derived from the necessity of $p \equiv p$ then, according to ETM, that necessity has its source in the essence of something (presumably, in the essence of generalized identity). It is therefore, on the present account, itself a statement of generalized identity. In that case, however, the proof establishes the necessity of generalized identity by deriving it from the necessity of a particular generalized identity. Appeals to this proof to establish (NP) will, given ETM, thus be viciously circular.

To vindicate the present attempt to establish (NP), one must jettison the proposal to reduce all necessity to essence and specify an alternative source for the necessity of self-identity. A plausible proposal that Leech considers takes $\forall p(p \equiv p)$ to be a theorem in any logic containing generalized identity, just as $\forall x(x=x)$ is a theorem in any logic containing identity (on any plausible semantic for such a logic, at least). The necessity of self-identity thus derives from its theoremhood; it is logical, not metaphysical, necessity. Just so, one may adopt the present suggestion and embrace a weaker version of ETM, on which only metaphysical necessity, not logical necessity, reduces to essence. She may then use the proof to establish a variant on (NP) relativized to metaphysical necessity, deriving the metaphysical necessity of generalized identity from the logical necessity of generalized self-identity.

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[8] What follows is the proof exactly as it appears in Leech (2021): 900. See Barcan (1947) and Kripke (1971) for the original proof. Variations are available.

There remains, however, a fundamental problem for this weakened approach: the essential truths turn out to be logically, not merely metaphysically, necessary. Thus, for example, 'For *x* to be Socrates is for *x* to be a human and *Fx*' turns out to be logically necessary. This result is highly counterintuitive, I suggest, for surely essential truths don't *appear* to be logical truths. But Leech flags two deeper issues. First, if essential truths are logical truths, then seemingly there is no longer any role for essence to play in accounting for the existence of modality. For if logical modality is the only type of modality there is and it is irreducible to anything else, then logical truth is sufficient to account for all the modality there is; we do not need the conceptual apparatus of essence in addition (Leech, 2021: 905). Second, and more damningly, if metaphysical necessity is supposed to be defined in terms of essence, and essential truths are only metaphysically necessary in virtue of being logically necessary, then seemingly the current account ends up defining metaphysical necessity in terms of logical necessity. And this, Leech worries, sounds dangerously close to eliminating metaphysical necessity where we merely wanted to reduce it:

> If, as has just been suggested, the essentialist has conceded that it is metaphysical necessities—but not logical necessities—that have their source in essence, then the risk is that they may salvage their view at the cost of deleting the entire phenomenon of merely metaphysical necessity, and hence necessity that has its source in essence, wholesale. (Leech, 2021: 905)

If we defend (NP) at the cost of eliminating the very phenomenon of purely metaphysical necessity (that is not logically necessary in addition), then we thereby eliminate ETM and, with it, the very impetus for defending (NP) in the first place. Yet, as the initial problem brought to light, if we wish to preserve ETM, we cannot also preserve (NP), on pain of circularity.

Leech's challenge can be understood as indicating that ETM, the reduction of essence to generalized identity, and the claim that (NP)'s truth derives from the logical necessity of self-identity form an inconsistent triad. It's important to note that Leech's challenge does not show that (NP) is incompatible with an account of essence as generalized identity per se, only that it becomes such if coupled with the claim that the provable necessity of generalized identity is what verifies (NP). This is important because I show in what follows that Husserl offers a means of defending (NP) by recourse to generalized identity which does not rely on the logical necessity of self-identity nor rely exclusively on any logical truths.

1.4 Correia's and Skiles' response: identity entails metaphysical necessity

 Correia and Skiles (2022) have authored a response to Leech's challenge of their own. In §4, I highlight some important similarities and dissimilarities between my defense of (NP) and theirs, as well as two distinctive advantages of my account. Here I'll very briefly summarize their response and flag a gap in it that my Husserlian account proposes to fill.

In response to the charge of circularity, Correia and Skiles argue that there is no circularity in establishing (NP) based on the generalized Barcan-Kripke proof

because doing so merely meets the *epistemic* challenge to *justify* or give reasons to believe (NP), not the metaphysical challenge of describing the metaphysical mechanism by which essential truths explain necessary ones (including their own necessity). To meet the epistemic challenge, one need only show that one is justified in believing that $\Box(p \equiv p)$, for then the justification for believing that $\Box(p \equiv q)$ will come by courtesy from the fact that $\Box(p \equiv q)$ can be deduced from $\Box(p \equiv p)$ (via the proof). Yet, in their words, "We take it that only the most extreme sceptic about metaphysical necessity would deny this" (Correia & Skiles, 2022: 1289)[9].

Correia and Skiles proceed to give another proof that they claim better captures the truly reductive spirit of (NP), its setting in ETM, unlike the generalized Barcan-Kripke proof to which Leech appeals (Correia & Skiles, 2022: 1286–7). The proof in question shows that a statement of the form $Iy \equiv_y Jy$ entails a statement of the form $\Box\forall y(Iy \rightarrow Jy)$. For example, if it is the case that to be a human is to be rational (inter alia), then this logically entails that it is necessarily the case that all humans are rational. In this case, a logical truth also serves as an auxiliary premise, but now the logical truth in question is not $\Box p \equiv p$ but rather $\Box\forall y(Iy \rightarrow Iy)$. The corresponding proof is as follows (quoted from Correia & Skiles, 2022: 1286):

(1) If $Iy \equiv_y Jy$ and $\Box\forall y(Iy \rightarrow Iy)$, then $\Box\forall y(Iy \rightarrow Jy)$ Instance Leibniz' Law for $\equiv_y$
(2) $\Box\forall y(Iy \rightarrow Iy)$ Premise
(3) If $Iy \equiv_y Jy$, then $\Box\forall y(Iy \rightarrow Jy)$ From 1, 2

Such a proof better captures the reductive spirit of (NP) because it delivers from a *non-modal* generalized identity a modal statement that does not involve the $\equiv$ operator. Thus statements involving modal operators can be derived, using auxiliary premises, from statements that do not contain modal operators at all (so that modal statements can be semantically reduced to some other form of statement) and that only contain the generalized identity operator (so that modal statements can be semantically reduced specifically to generalized identity statements) (see Correia & Skiles, 2022: 1288). Correia and Skiles then give a corresponding demonstration of how to derive modalized existential statements from generalized identity statements, and not just modalized universal statements (Correia & Skiles, 2022: 1287). But I won't rehearse that demonstration here, as nothing crucial in what follows turns on doing so.

Correia and Skiles propose to meet the *metaphysical* challenge by claiming that metaphysical necessities are logical consequences of the identities: generalized identity propositions generate metaphysically necessary ones by logically entailing them. In particular, Correia and Skiles articulate three distinct accounts of how the metaphysical necessity of a proposition is explained by the truth of some generalized identity proposition:

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[9]Correia and Skiles actually make this point of an analogous necessity claim, viz., $\Box\forall y(Iy \rightarrow Iy)$, which they use as a premise in an auxiliary proof, which I unpack just below, justifying the belief that generalized identity statements *generate* metaphysically necessary propositions in the sense that they entail the latter and the latter do not involve the $\equiv$ operation. But Correia and Skiles note that "our point extends to the generalized Barcan-Kripke proof" (Correia & Skiles, 2022: 1288). I have indicated the way in which it would do so.

The strong account: A proposition is necessary iff: it is a logical consequence of the true identities.

The weak account: A proposition is necessary iff: it is a logical consequence of the extensional correlates of the true identities.

The intermediate account: A proposition is necessary iff: it is a logical consequence of the true identities and their extensional correlates.[10]

The 'extensional correlate' of a generalized identity is, in their words,

the proposition you get from the generalized identity by replacing the identity operator with a material biconditional and, if the original identity is not factual, by taking the universal closure of the result. Thus, to illustrate, the extensional correlate of $<\varphi \equiv \psi>$ is $<\varphi \leftrightarrow \psi>$; (following standard notation, we use throughout the angled bracket to achieve reference to propositions), that of $<\varphi \equiv_x \psi>$ is $<\forall x(\varphi \leftrightarrow \psi)>$, and that of $<\varphi \equiv_{x,\,y} \psi>$ is $<\forall x \forall y(\varphi \leftrightarrow \psi)>$. (Correia & Skiles, 2022: 1291)

The strong account immediately secures that all generalized identities are necessary, given that every generalized identity is a logical consequence of itself. And it secures that the extensional correlate of any generalized identity is necessary given certain assumptions that they argue are plausible (vice versa the weak account, while the intermediate account immediate delivers both results).

I won't go into any further detail regarding these assumptions and Correia's and Skiles' argument for them. I simply want here to flag a gap in their specific defense of (NP) that my Husserlian account fills: while Correia and Skiles show how each of the three accounts independently establishes (NP), they do not provide any independent defense of any of the three accounts. They do not say *why* necessity should be defined as the logical consequence of the generalized identity propositions. Presumably their rationale is that, as per the generalized Barcan-Kripke proof and their proof given above, we have paradigms for how to logically derive certain metaphysically necessary propositions from generalized identities using Leibniz' Law for generalized identity. It's not then implausible to suppose that similar forms of proof could be used to establish the necessity of any necessary truth along with auxiliary premises. Still, this is a substantial assumption that is not itself defended. It is needed, however, to establish (NP) on Correia's and Skiles' account.

Once one or more of the three accounts of necessity are granted, Correia and Skiles are able to defend (NP) on the cheap: any generalized identity will be necessary just insofar as any generalized identity is a logical consequence of itself. This secures (NP) because, to repeat a point raised in §1, Correia and Skiles (like me and Husserl) propose to *reduce* essence to generalized identity. They argue, further, that what makes the necessity in question *metaphysical* is the fact that it does not derive, in each case, from any logical necessity but from a substantive proposition, as not

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[10] Quoted directly from Correia and Skiles (2022): 1292.

all identities hold with logical necessity (Correia & Skiles, 2022: 1296). Presumably this is also how they propose to explain why logical necessity does not erase the role of essence in accounting for metaphysical necessity. Correia and Skiles are then able, in the same stroke, to address the problem as to why every logical necessity is a metaphysical necessity if metaphysical and logical necessity have different sources: "Every logical necessity is (trivially) a logical consequence of the true generalized identities and/or their extensional correlates, and thus (trivially) counts as metaphysically necessary on all three" (Correia & Skiles, 2022: 1295–1296). So each component of Correia's and Skiles' response to Leech presupposes a substantive account of metaphysical necessity that does not itself find systematic defense. The Husserlian line of defense that I develop for ETM in what follows has the relative advantage of not having to presuppose any substantive definition of metaphysical necessity up front: it simply derives necessities from non-modal generalized identity statements which meet al.l of the typical pre-theoretical criteria of metaphysical necessity.

A crucial rider going forward: my Husserlian defense of ETM against Leech's challenge is, like Correia's and Skiles', meant to safeguard only the weaker version of ETM that Leech proposes, on which metaphysical necessity, not logical necessity, reduces to essence. As Leech acknowledges, this much is still a substantial contribution to the metaphysics of essence, and showing that Husserl provided the resources for such an account is a substantial historical contribution in its own right. So there is still much interesting philosophical work to be done here, even if the initial Finean ambition must be tempered to some degree. Of course, as Leech points out, adopting this weakened version of ETM requires giving up the idea that logical necessity is just a subspecies of metaphysical necessity. But such an account is independently plausible. For example, Edgington (2004) has argued that logical and metaphysical necessity must have different sources, and in Leech's own outlook:

> In taking such a view, the scope of the essentialist project would be reduced, but not wholly undermined. Perhaps it is a reasonable view, after all, to hold that metaphysical modality has its source in the essences of things, but that logical necessity is rather different, and has its source in something else. (Leech, 2021: 904)

So, in sum, the weakened version of ETM is still a metaphysically interesting theory in its own right. Nonetheless, it faces the twofold challenge of explaining (i) why essence still plays an indispensable role in accounting for metaphysical necessity (and the role is not rather fulfilled entirely by logical necessity) and (ii) why, intuitively, every logical necessity is also metaphysically necessary (for surely it is absurd to think that there are metaphysically possible worlds in which, say, Socrates is and is not a sandwich). In what follows, I propose to meet this challenge by drawing on key ideas from Husserl's theory of essences.

2 Essence and modality in Husserl

Many commentators take Husserl's official view to be that essence is equivalent to metaphysical necessity (e.g. Solomon, 1970; Simons, 1982; Smith, 1998; Kasmier, 2010). In this section, however, I argue that Husserl articulates an account on which metaphysical modality is grounded in essence, and that he therefore understands essence in decidedly non-modal terms. Some readers take Husserl's official account of essence to be modal yet argue that he ought to have embraced a non-modal, reductive account of essence, à la ETM.[11] For example, Mulligan (2004) argues that Husserl ought to have held that necessity is grounded in essence given the famous Finean counterexamples to modal accounts of essence—versions of which were voiced by his students, Ingarden and Hering—and given that he officially denies the *identity* of essentiality with necessity.[12] More strongly, Spinelli (2021a) shows that although Husserl officially endorses a modal account of essence, he himself makes theoretical commitments that are more coherent with ETM. In particular, Spinelli produces textual evidence showing that Husserl claims repeatedly that necessary truths are grounded in laws of essence and that Husserl endorsed the core of principles of what we nowadays recognize as the modal logic S5. He then argues that these two commitments together imply, and should have committed Husserl to, a view on which necessary truths are necessary but insufficient for, and metaphysically reducible to essential truths.[13] That is, they imply ETM. Furthermore, some readers find evidence of Husserl gesturing towards ETM, notably Fine (Fine, 1995c) and Correia (2004), prominent contemporary advocates for ETM. But they do not take Husserl to have articulated a developed version of ETM, much less a coherent rationale for endorsing (NP). I show that Husserl does indeed have a fully developed (albeit sketchily presented) version of ETM and that this theory contains the rudiments of an argument from essence to metaphysical necessity, which I reconstruct in §3 using two supplementary premises that Husserl does not explicitly defend.

The first thing to note is that Husserl clearly recognizes a metaphysical sense of necessity. He identifies a class of alethic necessities, which he variously calls the '*synthetic a priori* necessities' (LI v.2: 19) and the 'eidetic necessities' (Id I: 11; PP: 71, passim; EJ, §90), and which are necessary in a sense weaker than both logical necessity and conceptual or 'analytic' necessity. The synthetic or eidetic necessities are generic essential truths (what Husserl often calls 'pure laws': see LI v.2, §§10–11; Id. I, §2; §§33; EJ, §90, passim), examples of which include, for Husserl, statements such as '"A colour cannot exist without something coloured" or "A colour cannot exist without some space that it covers"' (LI v.2: 19), '"[A]ll material things are extended"' (Id I: 17), and 'the statements of geometry, e.g. when we designate the circle as a kind of conic section' (EJ: 351). Such statements are necessary in a sense that is clearly weaker than both the logical necessity of statements such as 'To be red is to be red' and the analytic necessity of statements such as 'To be a bachelor is to be an unmarried man'. Husserl, for his part, explicitly distinguishes synthetic/

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[11] Thanks to an anonymous referee for pushing me to distinguish this class of readings from the former.

[12] See (Mulligan, 2004): 396.

[13] See (Spinelli, 2021a): §3.

eidetic necessity in his sense from what he calls 'analytic necessity', which covers both conceptual and purely formal/syntactic truths (see e.g. LI v.2: 19–21). Yet statements of eidetic necessity like those above are necessary in a sense clearly stronger than the nomic necessity of a statement like 'All bodies are heavy'.[14] Given that metaphysical necessity is standardly held to be the alethic necessity which is stronger than nomic necessity yet weaker than logical and conceptual/analytic necessity (e.g. Kripke 1980; Lewis, 1986), we are well warranted in identifying Husserlian eidetic necessities with metaphysically necessary propositions. And since eidetic necessities are necessities that have their sources in the essences of things, it follows that Husserl takes metaphysical necessities to have their sources in the essences of things, thus endorsing (NP).

Nonetheless, Husserl flatly denies the identity of metaphysical necessity with essentiality: '[I]t is important to heed the discriminations and, above all, not to *designate* the universality of an essence itself as a necessity (the way it is usually done)' (Id I: 17, emphasis added). He claims, moreover, that every metaphysical necessity 'rests on' a generic essential truth or pure law. To give just a few representative examples:

> [W]e must assert it to be of the essence of such an objective necessity [of dependence] that it is correlated with a definite pure law in each case … that it is necessary *means* that it stands in a context of law. What prevents its being otherwise is the law which says that it is not merely so here and now, but universally so, and with a lawful universality. Here we must note that, just as the 'necessity' relevant to our discussion of non-independent 'moments' stands for an ideal or a priori necessity rooted in the essences of things, so, correspondingly, our 'lawfulness' stands for a lawfulness of essence, a non-empirical, universal and unconditionally valid lawfulness. (LI v.2: 12)

> The necessities or laws which serve to define given types of non-independent contents rest, as we often have emphasized, on the specific essence of the contents, on their peculiar nature. More precisely, they rest on the pure Genera, Species, differentiae under which, as contingent singulars, non-independent contents as well as their supplementing contents fall. (LI v.2: 19)

> '*S* is necessary' means: 'It is so [i.e., that *S*] according to a law'. (ILTK: 195).

> Every necessity points at a law; necessity and legality are correlates, and that gives a concept of necessity in a strict sense. (LAW, §43b: 219).

Claims like these conspire to present an account on which metaphysical necessity has its source in generic essence.

As for generic essential truths themselves, Husserl says that they are 'general' propositions. A proposition is general, for Husserl, iff it is about universals, or the instantiations of universals, alone and not any specific individuals (or sets or fusions of specific individuals) (EJ, §98). That is to say that, in the Husserlian framework,

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[14] See Id. I: 17 for Husserl's explicit defense of this view using the same example.

only universals and 'arbitrary' instances or objects-qua-instances of those universals are essence-bearers (see e.g. Id. I, §5; EJ, §§87, 98). Husserl understands a universal *u*'s essence as a plurality—in his words, a 'complement' (or 'stock' [*Bestand*])—of distinct universals *f, g, h, …*, such that what it is for a particular *x* to be an instance of *u* is for *x* to instantiate *f, g, h, …* (Id I: 11). The essence of *u* is, in other words, a group of universals *f, g, h, …* instantiation of which is the same as instantiation of *u*. While Husserl is notoriously unforthcoming about the fully analyzed form of essentialist statements, I suggest that such statements are most perspicuously modeled as generalized identity statements of the form 'To be an instance of *u* is to be an instance of *f, g, h, …* '.[15] For generalized identity statements of the form $Fx \equiv_x Gx \wedge Hx \wedge …$ transparently capture the type of expression Husserl has in mind when he characterizes the essence of *u* as a plurality of universals *f, g, h, …* instantiating which is the same as instantiating *u*. So, while Husserl himself does not use generalized identity propositions to represent essences, I believe that he should have. In any case I see no incompatibility in doing so for present purposes, which are to reconstruct a broadly Husserlian account of essence to show how such an account can establish (NP).[16] For ease of reference going forward, I'll call the universals that are essentially co-instantiated with a universal *u* the *essential correlates* of *u*. Thus, for example, assuming that to instantiate *being a human* is to instantiate *being rational* and *being an animal*, *being rational* and *being an animal* are the *essential correlates* of *being a human*.

To emphasize that essential truths are about the identities of universals (understood as their instantiation-structures) and not about any particular states of affairs involving the instantiation of the universals, Husserl often characterizes them as 'pure' or 'unconditioned'. And it is, he suggests, from their being pure or unconditioned and general that their necessity flows: as he indicates frequently, essential truths are necessary in virtue of their 'pure generality' (e.g. EJ: 319) or 'unconditioned universality' (e.g. Id I: 17).[17] For example,

> Every felt necessity is an indicative sign of an a priori in the sense of an unconditioned, so-called apodictic universality, which can be seen as such. Showing it is the test whether the felt necessity is a genuinely apodictic 1, and not a confusion with a merely empirical indication. (EJ: 52)

Thus it is somehow *because* essential truths are about universals (general) and not about any particular instantiations of them (pure), but about their identities alone, that essential truths are metaphysically necessary.

So, to take stock: in the Husserlian framework, generic essential truths concern what it is for specific universals to be instantiated. I've argued that the central truths so understood are most perspicuously analyzed as generalized identity propositions

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[15] See Spinelli (2021a: 158; Spinelli, 2016, §3.2) for the same reconstruction (modulo the language of instantiation).

[16] I'm grateful to an anonymous reviewer for pushing me to clarify that and how the present account is a partly revisionary reconstruction of Husserl's explicit remarks and not a work of scholarly exegesis, as well as for encouraging me to stick with my own reconstruction instead of overburdening the account with a detailed textual analysis.

[17] For the elision of "pure generality" with "unconditioned universality," see Id I: 15.

flanked by pluralities of propositions expressing the instantiations of specific universals. For abbreviation, I'll call such propositions 'HE-propositions' ('Husserlian essentialist propositions'). My plan for the rest of the paper is to argue for the metaphysical necessity of HE-propositions that Husserl appeals to but does not systematically demonstrate.

3 Formal ontology and the identities of properties

3.1 Property identities

The core lemma by which I propose to establish the metaphysical necessity of HE-propositions is a principle concerning the individuation of properties. More precisely, it lies with the modal claim, arguably endorsed by Husserl in various places, that a universal's instances perfectly resemble each other with respect to some generic feature in every world in which the universal is instantiated. I understand two individuals to perfectly resemble each other with respect to a feature iff there is an description that they both satisfy. Here and throughout my remarks apply to the following classes of features/descriptions: (i) 'natural' features in the sense of being the features we refer to in articulating our scientific theories (e.g. *being negatively charged*, *having mass*), which include dispositional features such as causal powers and liabilities (e.g. *dissolving salt*, *being fragile*), emotional dispositions (e.g. *being irascible*, *being depressive,* and their ilk; (ii) so-called primary *and* secondary qualities (e.g. *being cubic* as well as *being green*), (iii) sortal features (e.g. *being human*, *being a disease*), and (iv) formal features, which range over logical, modal, mereological, and mathematical relations (e.g. *being entailed by*, *being a part of*, *being necessitated by*, *being the product of*). I am targeting these classes of features simply because most philosophers believe that at least one of these four classes consists of metaphysically fundamental features, even if there is no consensus as to which of them do.

To sharpen the claim of interest here, say that two universals play the same *dispositional role* iff they confer the same dispositions on their instances, the same *explanatory role* iff they confer the same grounding relations on their instances, the same *qualitative role* if they confer all the same qualities—natural features as well as so-called secondary qualities—and the same sortal role iff they confer the same sortal features. A universal's *descriptive role* is then the disjunction of a dispositional, explanatory, qualitative, or sortal role (depending on the universal in question). The precise Husserlian claim I am targeting, which I call '*Transworld Identity of Universals*' (TIU), states that necessarily universals are individuated by descriptive role. That is:

(TIU)   For any universals u_1 and u_2 and possible worlds w_1 and w_2, such that u_1 is instantiated in w_1 and u_2 is instantiated in w_2, u_1 and u_2 are the same (for something to instantiate u_1 is for it to instantiate u_2) iff they play the same descriptive role.

So, for example, (TIU) entails that if everything that appears the way that we call 'appearing red' in the actual world instantiates the universal *red*, and if at some world *w* there is a universal all of whose instances appear the way we call 'appearing red', then that universal is *red*, the same color as is instantiated in the actual world. The force of (TIU) is that universals are necessarily individuated by the purely general descriptions that they confer on their instances.

One might worry that (TIU) begs the question against ETM because it is a necessitated generalized identity which, on the Correia-Skiles account under consideration, makes it a necessitated essence statement. Using it as a lemma in a demonstration of the necessity of essence might then seem circular, just as appealing to the necessity of the essence of self-identity to establish the necessity of essence was shown to be circular.

I argue on broadly Husserlian grounds, however, that (TIU) is true in virtue of the logical *form* of any property, not in virtue of the specific nature of each property. To this extent, (TIU) is a formally necessary truth in the Husserlian framework, in a sense to be unpacked below. And, as indicated in §1, my aim is merely to vindicate a weakened version of ETM as the reduction only of metaphysical modality, not of all modality, to essence. So there is no circularity in presupposing a formally necessary truth, (TIU), in our demonstration of (NP). But why believe that (TIU) is a formal truth as opposed to a substantive truth of essence?

3.2 Formal and material essence

To answer this question, we must further develop the Husserlian theory of essence. Husserl distinguishes, crucially, between 'regional essences' or 'material essences', on the one hand, and purely 'formal essences', on the other: the former are sets of propositions true in virtue of the specific natures of things—essences in the familiar sense—while the latter are sets of propositions true in virtue of the logical roles that their subject-terms play, in a suitably wide sense of 'logical' to mean formal or topic-neutral (see, e.g., Id I: 22, ff.). They are, in other words, the essential features that things inherit from their logical roles or, in Husserl's terms, their 'syntactic forms' or 'syntactic categories' (Id I: 24). For Husserl, syntactic forms are the grammatical roles involved in the formation of logically well-formed formulae (formulae capable of truth-evaluation). They include the concepts *subject* and *predicate,* as well as *set*, *sum, part*, *connective*, *operation*, etc. Husserl argues in *Investigation* IV that, in addition to the logical truths in the familiar sense (the propositions true in virtue of their logical form), there are formalizable laws specifying how concepts playing different logical roles can and cannot combine with each other to produce logically well-formed formulae (LI, vol. 2, 4: §14). He calls these 'formal laws of meaning' and 'laws of the combination and modification of meaning' (LI vol. 2, 4: 68), and he characterizes them and their instances as truths of 'a priori', 'universal grammar' (LI vol. 2, 4: 72, passim).

For Husserl, the truths of formal essence include not only the logical truths in the familiar sense but also the formal laws of meaning. For example, the formal essence of the concept or logical form *subject*, according to Husserl, is the set of propositions true in virtue of the essence of the subject-role, that is, true of any concept,

of any ontological category, just in case it plays the subject-role in a well-formed formula (see, e.g., Id I: §§10, 14). Here the subject-role should be understood as a *propositional*, not a sentential, role: for Husserl propositions have logical structures consisting, *inter alia*, of nominal, attributive, operational, and connective roles that complement the sentential roles of *subject*, *predicate*, *operator*, and *connective*, even if the grammatical forms of natural-language sentences do not always map 1:1 onto the logical forms of the propositions that they express. Thus, for example, < To be a subject is to require modification by some predicate to form a well-formed proposition ($\land \Psi$') >, < To be an operation is to be syncategorematic ($\land \Psi$) >, and < To be a connective is to depend for meaning on supplementation by categorematic terms ($\land \Psi$) > are truths of formal essence[18].

Since the formal laws of meaning are true in virtue of logical form or role, they are extensions of the logical truths, according to Husserl:

> The formal laws of meaning just discussed, which serve merely to separate the realms of sense and nonsense, must in an extended sense certainly count as laws of formal logic. (LI, vol. 2, 4: 71)

To avoid confusion, however, here and throughout I'll use the phrase 'logical necessity' only to denote logical truth in the familiarly narrow sense. I'll use 'formal-essential truth' to cover formal-grammatical and formal-ontological truth (to be unpacked below). Formal-essential necessity, necessity generated by formal-essential truths, is then a strength of alethic necessity in between that of strict logical necessity and metaphysical necessity. Despite being weaker than strict logical necessity, formal-essential necessity is still sourced in logical form and not in the material contents or meanings of concepts. It appears, for this reason, to be stronger, and much more like logical necessity, than the necessity of material essential truths such as 'To be a triangle is to be three-sided', 'To be a color is to have a value', 'To be composed of water is to be composed of H_2O', and their ilk. So, given that the necessity of formal-essential truths is weaker than strict logical necessity yet stronger than the metaphysical necessity of material-essential truths, there is good reason to treat it as a sui generis type of alethic necessity. Going forward, I'll simply call such necessity *formal-grammatical necessity*. But, more often, I'll find it convenient to follow Husserl in positing a general class of necessities true in virtue of forms (whether their holistic, propositional form or the forms of their constituents), which includes both formal-grammatical necessity and logical necessity in the familiar, narrow sense (truth in virtue of propositional form) as proper subspecies. I'll call necessity of this grade *formal necessity*, formally necessitated truth *formal truth*, and any truth compossible with the formal truths a *formal possibility*. Logical necessity can be understood as a species of formal necessity, along with the weaker formal-grammatical necessity, because propositions of both types are true in virtue of facts about their logical structures: formal-grammatical truths are true in virtue of the roles that their

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[18] For Husserl's discussion, see LI, vol. 2, 4: §§5, 9–12. Unfortunately, Husserl does not provide many concrete examples of formal-grammatical truths. He also does not explicitly analyze formal-grammatical laws as generalized identities; such an analysis is a feature of my reconstruction, as noted in §2.

constituents play in the formation of logically well-formed propositions, while logical truths in the strict sense are true in virtue of the special types of logical formations that their constituents produce. Logical truths are also formally-grammatically necessary, on this account, because the latter specify conditions that must be satisfied by any proposition for it to be logically well-formed, and a proposition can be true in virtue of logical form only if it is logically well-formed, since being logically well-formed is necessary for any formula to be capable of truth or falsity whatsoever. So, in short, logical necessity entails formal-grammatical necessity just insofar as tautologies entail the rules for the construction of any well-formed formula.[19]

3.3 Formal-ontological truth

Crucially, further, Husserl recognizes, under the genus of formal necessity, the existence of 'formal-ontological' truths in addition to the formal laws of universal grammar. Truths of formal ontology are truths regarding the different roles that possible entities can play in the formation of facts with logical structure and their possible and necessary interactions. As such, they are ontological correlates of the formal-grammatical truths, and their necessity is of the same strength as that of the former. In particular, Husserl takes the concepts *object* and *property* to be the formal-ontological roles or categories correlated with the logical-semantic categories *subject* and *predicate*. They are 'ontological' categories in the sense that whereas *subject* and *predicate* have other concepts in their extensions, *object* and *property* have mind- and language-external entities in their extensions (see, e.g., Id I: 25).[20] They are 'formal' categories in the sense that they ground truths regarding the possible formation of facts but not truths of any material domain. This subsection unpacks the idea of a formal-ontological role.

Start with objects. Husserl holds that some entities have the ontological form *object* because they can be represented perspicuously only by concepts that essentially play the subject-role in propositions that they feature in, concepts that we conventionally use singular constants to represent. These include all possible particulars, such as Socrates, the brown color of this desk I'm sitting at, my belief that there is beer in my fridge, God, etc. The objecthood of such entities cannot be a function of their material essences, for their material essences form a radically heterogenous class: there is no natural genus common to all of these entities. Rather, *being an object* is a feature that cuts across entities of any natural class; it is a *topic-neutral* feature. This is the primary sense in which Husserl understands *being an object* to be a formal feature.

Specifically, *being an object* is a feature that entities have in virtue of their role in producing facts with logical structure, not of their specific properties. For example, just as it is a formal-grammatical truth that to be a subject is to require modification by some predicate to form a well-formed proposition ($\land \Psi$), so it is a formal-ontological truth that to be an object is to require modification by some way of being to form

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[20] Husserl also includes *constitution*, *state of affairs*, *relation*, *identity*, *part-whole, set*, *genus-species*, and *number* among the objectual logical categories (the categories of formal ontology). See Id. I: 23.

a fact with logical structure (∧ **Ψ**), and that to be an object is to be capable of being described by properties (∧ **Ψ**). Each of the entities mentioned above—Socrates, this desk, my belief, etc.—is an object, then, insofar as it can be modified by other entities (properties) and must be to form facts; it cannot form facts by modifying other entities. It makes no sense, for example, to say of something that it has Socrates as a feature; necessarily, Socrates is not a way of being. Socrates can only be perspicuously represented as the subject of a sentence, never as a predicate, because concepts that play the predicate-role modify other concepts and thus can only perspicuously capture the behaviors of ways of being or *properties*.[21] So *being an object* is a role that certain entities play in the formation of facts and is to this extent analogous to a role that certain concepts play in the formation of propositions. *Being an object* thus grounds truths that parallel certain formal-grammatical truths. This is further warrant for taking it to be a formal feature, and for taking truths grounded in its instantiation to be formal truths.

Thus, for example, Socrates has the *form* of an object because he is an entity that can instantiate, or be described by, properties yet not an entity that can describe or be instantiated by anything else. The very idea that Socrates is instantiated by something else is simply unintelligible. It does not represent a logically well-formed *fact*.

Similarly, *being a property* is a formal-ontological feature. It is *formal*-ontological inasmuch as it is topic-neutral just like *being an object*: it applies to entities across every natural class. For any natural domain, at any level of specificity, such as the physical, the mental, the chemical, the spiritual, etc., there are objects *and* properties unique to that domain, yet there is clearly still a typological distinction to be drawn between the objects and properties within each domain. This typological distinction cannot then be a difference of genus or material essence; it must be a difference of form. *Being a property* also corresponds to a role that certain entities play in the formation of logically structured facts: to be a property is to be a way of being that modifies other entities to form facts by coming to be present in them. It is thus also a formal feature in the sense that it plays a role in the formation of facts that parallels the role played by predicates in the formation of well-formed propositions. It is formal-*ontological*, not formal-grammatical, because it is a feature of mind-independent entities, not of concepts.

3.4 Properties have descriptive form

What does all this have to do with (TIU)? I argue, based on the considerations just given, that just as it is a Husserlian formal-ontological truth that to be an object is to be modified by some way of being, so it is a Husserlian formal-ontological truth that to be a property is to modify some possible object, to be a way in which objects can be.[22] Since ways of being are descriptive, it turns out that to be a formal-ontological

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[21] To be sure, one can meaningfully say of someone that they 'are Socrates', but this expression is merely a verbal abbreviation of the concept designating the property of being identical with Socrates, which is plainly not the same concept as <Socrates> since the latter designates a concrete entity and does not refer to any relations, whereas the former refers to an abstract entity containing an identity relation as a part.

[22] Husserl himself does not delve into any formal laws generated by the feature *being a property*.

truth that properties are entities which play the descriptive role. For example, it is a formal-ontological truth that to be red is to qualitatively appear as red. This is not to deny that properties can instantiate properties of their own. It is simply to deny that something could be a property yet not be a way in which some other entities could be. To be a property like *is snub-nosed* or *is brown* is a way that non-instantiables like Socrates and this desk can be, entities that can be instantiated by distinct entities; while properties can also instantiate (higher-order) properties, such as *being a property*, *being abstract*, etc., they are distinguished from objects like Socrates by the fact that they *can* modify other entities whereas objects cannot even coherently be said to do so. Just as objects cannot coherently be understood as instantiable ways of being, so, I argue, the very idea that a property like *being brown* could be a primitive, non-instantiable individual like Socrates is simply incoherent. To this extent, I take it to belong to the very *form* of a property that it possibly describes something else. By extension, I take it to belong to the very form of a property that it is individuated by a general descriptive role and not primitively.

Importantly, given that descriptive roles are general or multiply applicable, it follows that properties are individuated by something multiply applicable. This just is to say that properties are identical with universals. Accordingly, it is a formal-ontological truth that if there are properties, they are universals: entities ascribable to multiple distinct entities.[23]

This much, however, is not sufficient to establish (TIU). For (TIU) is a transworld identity claim and hence a proposition of *de re* necessity. Yet the foregoing establishes only a *de dicto* proposition about the intraworld identities of properties, namely:

(IIU) For all formally possible worlds w, for any two universals u_1 and u_2, u_1 and u_2 are the same universal at w iff they play the same descriptive role at w [24].

Nonetheless, I argue, (TIU) is a direct material consequence of (IIU). Suppose that (TIU) is false: universals recombine with different descriptive roles in different worlds. This means that it is true at the actual world that possibly, universals play different descriptive roles than they actually do. For this to be the case, universals must be individuated in the actual world ('@') in part by something nondescriptive, perhaps even primitive, that could exist in another possible world to explain why the *same* universal exists in that world. For example, if the universal *is red* plays, in a possible world w, the descriptive role played by *is green* in @ yet is still the very same as the universal which plays the redness-role in @, then some individuating component of *is red* in @ must survive in w, and by hypothesis this component is something other than a descriptive role. Yet such a scenario is precisely what (IIU) denies: (IIU) identifies universals with their descriptive roles at every world in which there are universals (which may well be all of them). So if (TIU) were false, (IIU)

would also be false. Thus (TIU) follows from (IIU), not by strict logical entailment, but given highly plausible metaphysical principles.

Since (TIU) is a consequence of the formal-essential truth (IIU) and is not derived in any way from any *material*-essential truths, it holds with formal necessity alone. Just so, (TIU) can function as a premise in a demonstration of the necessity of material-essential truths without circularity. Thus (TIU) is a formal truth about what role in structuring total reality something plays just in case it is a property as opposed to an object; it is not a substantive proposition about the material essence of any real property but is presupposed by any such proposition.

The idea that (IIU) and (TIU) are formal truths is motivated, I suggest, by the fact that questions concerning whether properties are primitive individuals, classes, or descriptions, etc. appear to be directly correlated with questions concerning whether the most perspicuous formalization of properties models them in terms of singular constants, sets, irreducibly higher-order predicate-constants, and so forth, just as, for example, the ontological form of an object like Socrates was seen to be directly correlated with the fact that Socrates can only be perspicuously represented using singular constants in the subject-position. Just so, mistakes regarding how to individuate properties in general are plausibly regarded as partly involving mistakes of formalization.

Given its status as a formal truth, (TIU) can be understood as an inference rule stating that any polyadic schema of the form '*Ixu*' formed by the dyadic 'instantiates' predicate, a free variable, and a constant designating a universal is convertible into a monadic schema of the form '*Δx*', where '*Δ*' is an irreducibly second-order monadic predicate corresponding to a purely general description, one not containing reference to any particulars or to any particular values of particular. Thus the '*Δx*' construction may be used legitimately to model predicates such as 'is green', 'having volume', and 'being a person' but not to model the predicates 'is the husband of Xanthippe', 'has mass of $9.1093837 \times 10^{-31}$ kg', or 'being identical with Socrates'.[25]

(TIU) entails the denial of *quidditism*, the view that that properties are individuated by primitive identities or 'quiddities' and that their descriptive roles are not fixed by these identities; they merely happen to coincide with them in the actual world. The description we call 'being red' may be the result of instantiating *red* in our world but of instantiating *green* in another; the indefinite description we call 'having mass' may be the result of instantiating *mass* in our world but of instantiating *volume* in another; and so on. Quidditism is not without proponents, most notably Lewis (1986, 2009), in which case, perhaps, (TIU) lacks the self-evidence one would expect of a purely formal truth. However, quidditism is generally rejected simply for being too counterintuitive to take on board—most philosophers, myself and Husserl included, share the intuition vocalized by Black: 'My intuition is that to play the nomological role of some colour or flavour is to be that colour or flavour, and that the idea of two qualities swapping nomological roles is thus unintelligible' (Black, 2000: 94). I think that what underwrites the intuition that quidditism is *unintelligible*, as Black puts it, is that it amounts to a category mistake: by assigning primitive identities to properties,

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[25] Thanks to an anonymous referee for pressing me to clarify the sense in which (TIU) is not a substantive (material) truth of essence.

independent of descriptive role, we are putting properties in the logical position of subject and thereby running afoul of a law of formal ontology or else equivocating on 'property'.

4 Necessity and universality: a Husserlian argument for (NP)

4.1 From (TIU) to (NP)

With (TIU) now in grasp, let's return to the demonstration of (NP). Insofar as (TIU) is a truth of formal *essence*, the worry about the circularity of deriving (NP) from (TIU) might persist. So let me address it in more detail. Given the distinction between formal and material essence and the rider above that the necessity generated by formal essence, by whatever name, is stronger than strict metaphysical necessity, there is nothing circular about deriving the metaphysical necessity of essential truths in general from the formal necessity of a particular essential truth. For it is specifically *metaphysical* necessity, not formal necessity, that essentialists wish to reduce to the essences of things, and it is to the *material* essences of things, not their formal essences, that we wish to reduce the metaphysical necessities. Just so, our target claim simply needs to be reformulated more precisely as:

(NP*)   If being (an) F is a material-essential property of x, then being (an) F is a metaphysically necessary property of x.

This is to say that the substantive contribution of my Husserlian account is to show how *material* essence plays an indispensable role in generating metaphysical modality. Relative to this aim, there is nothing viciously circular about using a necessary truth of formal essence—(TIU)—as a premise in a demonstration of the necessity of material essence. For my account does not attempt to reduce metaphysical necessity and formal necessity to the same source. It rather derives a *specific* type of necessity—metaphysical necessity—from *one* of two general types of essence: material as opposed to formal essence. It merely appeals to a different type of necessity, formal necessity, of a different type of essence, formal essence, as a premise in that derivation. It does not incur the problem of circularly deriving the necessity of essence in general the necessity of a specific type of essence, as Leech shows Correia's and Skiles's account to have done.

   Even thus weakened, my account still delivers what was originally promised: a reduction of metaphysical modality to the essences of things. It posits a natural, general distinction among the types of essences there are: *specific* natures, those which give *informative* answers to questions of the form 'What is this?', and merely formal natures that do not give any informative answers to questions regarding the specific natures of particular things. And it then shows merely that the formal-cum-metaphysical necessity of the second type, in conjunction with other plausible assumptions, generates the metaphysical necessity of the first type. This is no problem for the present account, as Leech showed it to be for the restricted variant of the Correia-Skiles account on which logical necessity is not sourced in essence, since the formal neces-

sity that is (TIU) does not, as I'm about to show, do *all* of the work in establishing the necessity of essence: the concept of material essence still plays an indispensable role, along with (TIU), in accounting for metaphysical necessity. On the restricted variant of Correia's and Skiles' account (as reconstructed by Leech), on which only metaphysical necessity is in question and logical necessity is taken to have a different source or to be primitive, the non-(material-)essential, logical necessity of self-identity does all of the work in establishing (NP), and that is the only reason why that variant is problematic for their account: it problematically threatens to delete the role of essence in accounting for metaphysical necessity. My account makes an analogous restriction while avoiding the source of the problem. Thus it meets the other component of the challenge for the weakened version of ETM, which is to explain why essence, not logical necessity alone (or, somewhat differently, in the context of my Husserlian account, why material essence, not formal essence alone), is *needed* to generate metaphysical modality.

4.2 Formal and metaphysical necessity

It was shown in §1, however, that since a weakened version of ETM like ours must deny that logical necessity is a species of metaphysical necessity, and that it is tractable only if it offers an alternative explanation of why, intuitively, every logical necessity is also metaphysically necessary if logical modality is not a species of metaphysical modality but derives from a distinct source. The same question must now be posed of the broader class of formal necessities: why is it that every formal necessity is also metaphysically necessary if the latter has a different source than the former? Any answer to this question will by courtesy answer the question for strict logical necessity since logical necessity *is* a species of formal necessity.

My Husserlian account offers a substantive metaphysical reason for why every formal necessity seems also to be a metaphysical necessity: every material essence *contains* a formal essence. Consider Socrates. It is part of his formal essence to play the formal-ontological role of being an object that bears properties. If he were not an object, then he could not bear any properties simpliciter. By extension, he could not bear any material-essential properties. So if Socrates has a material essence, he has a formal essence. The point generalizes. Every world in which things have the material essences that they actually do is a world in which they have the formal essences that they actually do. Thus, if a proposition is true at all worlds in which things have their actual formal essences, then it is true at all worlds in which things have their actual material essences. Since the proposal is to reduce metaphysical necessity to material essence, we can think of the metaphysical necessities as the propositions true in every world in which things have the material essences that they actually do. And we can think of the formal necessities as the propositions true in every world in which things have the formal essences they actually do. In that case, if a proposition is formally necessary at any world (true at all formally possible worlds) then it is also metaphysically necessary at that world (true at all metaphysically possible worlds). Note, however, that the converse does not hold. Socrates shares his formal essence with everything else that plays the role of object, and so any world at which Socrates

swaps material essences with some other object will still be a world at which he retains his formal essence.

It should be noted that (TIU) does not exclude dispositional essentialism, the view that at least some properties are essentially dispositional as opposed to occurrent qualities (see Bird, 2007).[26] For, as defined above, the notion of a descriptive role includes dispositional roles, i.e. descriptions of dispositions, of tendencies of objects to manifest certain qualities, such as being risible, being fragile, or being conductive; it is not limited to descriptions of occurrent qualities such as being red, being cubic, or being taller than Fred. So (TIU) would still hold even if it were the case that all properties turn out, at the metaphysically most fundamental level of description, to be dispositions.[27]

Furthermore, I take Husserl's proposal to extend the formal truths beyond the logical truths, in the manner suggested, to be independently justified. For undeniably there are various syntactic roles that concepts can play—subject, predicate, operator, etc.—and there appear to be necessary truths generated on their basis alone, e.g. that every meaningful predicate modifies some subject. While these necessary truths may not be tautologies (although I leave it open whether they might be fully analyzed as tautologies), their necessity is no less a function of syntactic form than is the necessity of a tautology; the difference is that tautologies are true in virtue of their syntactic forms whereas formal-grammatical truths are true in virtue of the syntactic roles of the objects they are about, that is, true in virtue of the specific nodes in the structure of a well-formed proposition that they occupy. So it is certainly not unreasonable to count them among the formal truths, even if they are not strictly logical truths. Of course, embracing such a view requires us to take on board the controversial view that propositions are structured entities.[28] Here and throughout I'll simply assume Husserl's view of propositions as complexes with 'meanings' or 'concepts' as constituents that form propositions in virtue of mutually depending on them for their abilities to mean what they do (e.g., the concept <Socrates> only refers when combined with a predicate like <is wise> to form a proposition that says something about Socrates; see LI, v.2, 4) [29].

As for the inclusion of formal-*ontological* truths among the properly formal truths, this seems no less intuitively evident. There certainly appear to be formal-ontological truths: just as there are semantically primitive subject-concepts like <Socrates> and

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[26] Thanks to an anonymous referee for raising this question to me.

[27] Note, however, that dispositionalism about modality, the view that modality reduces to dispositions, is strictly incompatible with ETM as a theory of modality. See Vetter (2020).

[28] Many philosophers deny this, holding instead that propositions are reducible to sets—sets of truth-makers, say, or sets of worlds. Others have proposed algebraic approaches to decomposing propositions that do not to accord them mereological structure (see, e.g., Bealer 1982, 1993 and Zalta 1983). Even proponents of propositional structure debate what the constituents of propositions are and the principles by which they combine to form the propositions that comprise them. Some hold they are complex intensions (functions from sentences to worlds) built from simple intensions (functions from individuals to worlds) (see, e.g., Lewis 1972; Cresswell 1985); neo-Russellians hold that they have individuals, properties, and relations as their constituents (see, e.g., Soames 1987; Salmon 1989a); Frege, in contrast, held that propositions were composed of senses or concepts. Husserl's view is Fregean in this basic sense.

[29] Thanks to an anonymous referee for reminding me of the controversy surrounding structured propositions and inviting me to situate my account within it.

ways they can be modified by predicates, so there are objects (referents of those subjects) and ways that objects are or can be described (expressed by the ways the subjects are modified). There appear, moreover, to be necessary truths generated on their basis alone, e.g. that every object must be modified by some way of being to form a fact, and that every way in which an entity can must modify something distinct from it to form a fact. And, as with formal-grammatical truths, the necessity of formal-ontological truths seems to flow purely from the roles that the entities they are about play in the formation of logically structured facts. Neither their truth nor its necessity seems to depend on the specific natures of entities of some domain. Formal-ontological truths thus have a feature distinctive of every other formal truth, namely, that they are topic-neutral. They do not depend on any truths about the objects and properties falling under any specific domain, and thus would remain true even if no specific objects and properties existed at all. Rather, their truth seems unassailable when one merely considers how propositional structure reflects combinations of objects and properties—states of affairs—in the world. This being so, it seems reasonable enough to me to countenance Husserlian formal-ontological truths and to grant them the status of formally, not purely metaphysically, necessary truths.

4.3 The argument for (NP*)

We are finally positioned to see how Husserl's theory of essence establishes (NP). I take the foregoing as independent motivation enough for (TIU), even if the claim is not entirely uncontroversial. If so, the demonstration of (NP*) to which Husserl marshals (TIU) proceeds on independently plausible grounds. Now on to the demonstration.

The first step is to note that because, on the present account, universals are necessarily individuated by descriptive role, we can reformulate (TIU) as a modalized generalized identity statement flanked by an open sentence 'Ixu' denoting the instantiation of a universal u and an open sentence 'Δx' denoting the satisfaction of an indefinite description Δ such that u confers Δ onto all of u's instances:

(TIU)   For any universal u and description Δ such that u confers Δ onto all of u's instances, it is necessarily the case that $Ixu \equiv_x \Delta x$.

In other words, (TIU) is the generalization of any statement of the form $\Box(Ixu \equiv_x \Delta x)$.

(NP*) falls out of the conjunction of (TIU) and the background assumption that essential truths are HE-propositions. Take the HE-proposition $Ixu \equiv_x Ixf \wedge Ixg$. Since this is an HE-proposition, each of u, f, and g is a universal. So, by (TIU), there are descriptions Δ_1, Δ_2, and Δ_3 such that $\Box(Ixu \equiv_x \Delta_1 x) \wedge \Box(Ixf \wedge Ixg \equiv_x \Delta_2 x \wedge \Delta_3 x)$. By (LL$^{\text{GEN}}$), $Ixu \equiv_x Ixf \wedge Ixg$ and $\Box(Ixf \wedge Ixg \equiv_x \Delta_2 \wedge \Delta_3)$ jointly imply that $Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x$. So $Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x$. Again by (LL$^{\text{GEN}}$), $Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x$ and $\Box(Ixu \equiv_x \Delta_1 x)$ jointly imply that $\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x$.

And $\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x$ is necessary, I argue, simply in virtue of the fact that the Δs are descriptions. For as we just saw above, it belongs to the very concept of a description that two things in different worlds that objectively resemble each other satisfy the same description: something that appears red in the actual world and something that

appears red in a possible world w both satisfy the description 'is red', for example. This is beyond dispute. The quidditist may hold that the same properties correspond to different descriptions in different possible worlds, but even she cannot intelligibly hold that the same descriptions correspond to different descriptive contents in different possible worlds. To appear the way we call 'being red' is the same in all worlds in which something appears that way, even if in some worlds *green* or *blue* makes things appear that way instead of *red*. So given $\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x$, it is also true that $\Box(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x)$. Let us call the generalization of the principle just stated the description identification principle (DIP):

1. (DIP) For any description $\Delta_\alpha x$, it is the case that if $\Delta_\alpha x \equiv_x \Delta_\beta x \wedge \Delta_\gamma x$, then $\Box(\Delta_\alpha x \equiv_x \Delta_\beta x \wedge \Delta_\gamma x)$

Since, as indicated above, (DIP) simply follows from the very form of a descriptive role, it can be understood as a formal-ontological truth. All is still well and good vis-à-vis demonstrating (NP). For the demonstration, as we are about to see, still relies on a metaphysical substantive premise in addition to (TIU) and (DIP), namely, the premise that essential truths are about a specific type of entity, universals. (TIU) and (DIP) only implicate universals; they do not apply to particulars, and a metaphysical interpretation of the variables in the second argument-place of the 'I' predicate as standing in for universals is necessary for the demonstration to go through.

Now we have the trio of $\Box(Ixu \equiv_x \Delta_1 x)$, $\Box(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x)$, and $\Box(Ixf \wedge Ixg \equiv_x \Delta_2 x \wedge \Delta_3 x)$. (LL^{GEN}) and the conjunction of $\Box(Ixu \equiv_x \Delta_1 x)$ and $\Box(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x)$ jointly imply that $\Box(Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x)$, and (LL^{GEN}) and the conjunction of $\Box(Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x)$ and $\Box(Ixf \wedge Ixg \equiv_x \Delta_2 x \wedge \Delta_3 x)$ jointly imply that $\Box(Ixu \equiv_x Ixf \wedge Ixg)$, securing the necessity of our initial essentialist proposition. Generalizing from this pattern of reasoning, we obtain (NP).

Schematically, then, (NP) is obtained, in the Husserlian framework, in the following way:

(1) $Ixu \equiv_x Ixf \wedge Ixg$. Premise
(2) $\Box(Ixu \equiv_x \Delta_1 x) \wedge \Box(Ixf \wedge Ixg \equiv_x \Delta_2 x \wedge \Delta_3 x)$. From (TIU), 1
(3) If $p \equiv_v q$ and $\mathbf{\Phi}$, then $\mathbf{\Phi}[q//p]$. (LL^{GEN})
(4) $[(Ixu \equiv_x Ixf \wedge Ixg) \wedge \Box(Ixf \wedge Ixg \equiv_x \Delta_2 x \wedge \Delta_3 x)] \rightarrow [Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x]$ Instance of 3
(5) $Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x$. From 1, 2, 4
(6) $[(Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x) \wedge \Box(Ixu \equiv_x \Delta_1 x)] \rightarrow [\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x]$. Instance of 3
(7) $\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x$. From 2, 5, 6 (conjunction elimination on 2)
(8) $(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x) \rightarrow \Box(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x)$ Instance of (DIP)
(9) $\Box(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x)$ From 7, 8
(10) $[\Box(Ixu \equiv_x \Delta_1 x) \wedge \Box(\Delta_1 x \equiv_x \Delta_2 x \wedge \Delta_3 x)] \rightarrow \Box(Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x)$ Instance of 3
(11) $\Box(Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x)$ From 2, 9, 10 (conjunction elimination on 2)
(12) $[\Box(Ixu \equiv_x \Delta_2 x \wedge \Delta_3 x) \wedge \Box(Ixf \wedge Ixg \equiv_x \Delta_2 x \wedge \Delta_3 x)] \rightarrow \Box(Ixu \equiv_x Ixf \wedge Ixg)$ Instance of 3
(13) $\Box(Ixu \equiv_x Ixf \wedge Ixg)$ From 2, 11, 12 (conjunction elimination on 2)

In short, once we accept that universals are individuated across worlds by their descriptive roles and we appreciate the formal-ontological truth that a descriptive role cannot fail to correspond to the same descriptions in every world where something plays it, we need then only keep applying (LL$^{\text{GEN}}$) successively to obtain the necessity of any HE-proposition we have started with. (NP) is then secured as the generalization from any such path of entailment from an HE-proposition to its necessitation. Through this line of reasoning, then, (NP) is established by recourse to a generalized variant of Leibniz' Law, a proposition about the individuation conditions of universals (TIU), and the background (Husserlian essentialist) assumption that the open sentences flanking the generalized identity statements of the proof express the instantiations of universals.

This demonstration does not derive (NP) from any logical necessity, and it does not derive (NP) *exclusively* from any formal truths. For even though (TIU) is a formal truth, and even given the assumption that (LL$^{\text{GEN}}$) is a logical truth in a broad sense, my demonstration of the necessity of essential truths still accords an indispensable role to essences in accounting for their own necessities and, by extension, for the necessities of all metaphysically necessary truths. For premise (2) only follows from premise (1) given the unstated background assumption that essential truths concern universals. This is a substantive assumption about the metaphysics of essences, namely, that essences are structures composed of universals. For (2) can only be an instance of (TIU) from (1) if the generalized identity statement expressed by (1) is understood to have universals for the values of '*u*', '*f*', and '*g*'; if those variables are interpreted as having non-universals as their values then (TIU) cannot be applied to (1) to obtain (2). This is a non-trivial, metaphysically loaded interpretation of the meanings of the clauses in the identity statement. The idea is that every universal *u* has an ontological form, its formal essence, that helps to necessitate *u*'s having any non-formal properties that belong to its specific identity, its material essence. For example, assuming it's true that to instantiate *being human* is to insantiate *being rational* and *being an animal*, this will be necessarily true given that the entities it's about, the universals *being human*, etc., are universals and such have the ontological form of descriptive roles. So, in general, universals have ontological forms that necessitate their instantiation-structures. Thus our demonstration of (NP) delivers a modalized identity statement from a non-modalized one by relying on a non-logical, substantive metaphysical interpretation about the entities designated by the generalized identity statement involved in the proof. It does not offload the role of essence in accounting for metaphysical modality onto logical necessity.

Notably, by locating the source of modality in a modal feature of properties, my account is similar to dispositionalist accounts of modality, which propose to reduce metaphysical modality to dispositions on grounds that dispositions are inherently modal in form (e.g. Borghini & Williams 2008; Jacobs 2010; Vetter, 2015).[30][31] Yet my account crucially differs from such dispositionalist theories in that they are *possibility-first* accounts—they reduce metaphysical possibility directly to the natures of

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[30] Thanks to an anonymous referee for pointing out this feature of my account.

[31] Vetter in particular defines dispositions as possibilities sourced in the essences of things, and thus forges an even deeper affinity with my property-based essentialism about modality.

properties and then simply derivatively obtains a reduction of necessity by exploiting the equivalence of $\Diamond p$ and $\neg\Box\neg p$—whereas mine is a *necessity-first* account: it reduces metaphysical necessity directly to the natures of properties and then derivatively obtains a reduction of possibility by exploiting the equivalence of $\Diamond p$ and $\neg\Box\neg p$[32].

4.4 Advantages of my Husserlian account

My Husserlian defense of (NP) shares in common with Correia's and Skiles' defense a reliance on certain formal truths and the engine of logical consequence to derive modalizations of generalized identities from their non-modalized counterparts. That is, both accounts show that, given certain assumptions, (NP) is *provable* and thus epistemically well-grounded.

My account crucially differs from theirs, however, in two notable respects. First, it does not rely on any strictly logical truths as theirs does, only on a formal-essential truth. This is a not-insignificant difference when it comes to the underlying metaphysical *explanation* of why (NP) is true: the reason *why* an essential truth like 'To instantiate *being human* is to instantiate *being rational* and *being an animal*' is metaphysically necessary, on my account, has nothing to do with *its* logical form but with the *onto*logical form of the *entities* it is about (more on this difference below). Second, it makes indispensable use of a *metaphysical* thesis about essence in addition: the thesis that essences are the identities of the instantiation-structures of universals, and that therefore the bearers of essence are universals and not particulars (which comes with the semantic thesis that essential truths are about the instantiation-structures of universals and never about entities of different types). Because this is a substantive, *non-logical* thesis about what types of entities essence-bearers are, and because it plays an indispensable role in driving the proof of (NP), essences—more specifically the forms of the universals that constitute essences—play a role in generating metaphysical necessity that cannot be discharged by logical necessity alone.[33]

Moreover, as suggested, my account bridges the *explanatory* (as opposed to epistemic) gap between essence and metaphysical modality in a very different way than Correia's and Skiles' does. That is, while both accounts use the logical consequence as the vehicle for establishing the truth of (NP), mine has a different strategy for meeting the distinctly *metaphysical* challenge of specifying *how* essential truths manage to generate metaphysically necessary ones (as opposed to the epistemic challenge of giving reasons to believe that essential truths generate metaphysically necessary ones, i.e. that (NP) is true, which is accomplished by the proofs themselves). By using (TIU) as a premise in establishing (NP), my account locates the source of modality in an inherent modal feature of properties-qua-universals, namely, that truths about their identities are true at all worlds in which they are instantiated, given that they are

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[32] In light of their affinities, one might consider the prospects of merging my account with a version of dispositionalism about metaphysical possibility. However, Vetter (2020) has given compelling arguments showing why such a merger is unforthcoming and ETM and dispositionalism are best seen as rivals.

[33] Thanks to an anonymous reviewer for pushing me to clarify the necessary role of essence in producing metaphysical necessity.

individuated by how they describe objects and descriptions are the same descriptions in every world. It then identifies this source with essences by providing reasons to believe that essential truths, in their final analysis, have universals as their subject-matters (I provide such reasons in §4 below). Essences generate metaphysical necessities because they involve universals and universals have this modal feature in virtue of their ontological form. Thus, on my account, essential truths imply metaphysical necessary ones in virtue of their *content*—the identities of universals—and not the logical form of this content.

In contrast with my account, Correia's and Skiles's account has it that essences generate metaphysical necessities via logical consequence alone, as we saw in §1. The metaphysical explanation of how essential truths generate metaphysically necessary ones is that they do so in virtue of their logical form, in virtue of being identity statements. It is thus the logical *form* of essential truths that does all of the metaphysical heavy-lifting in generating the metaphysical necessities, whereas on my account the content of essential truths plays a crucial role in the explanation. Recall, however, that the derivation of metaphysical necessity from the form of generalized identities alone depends on a global definition of necessity as what is logically entailed by a generalized identity (or its extensional correlate). So part of the metaphysical explanation of how essences generate metaphysical necessities has to do with a stipulation as to what metaphysical necessities are. This is, as noted above, a substantive commitment of Correia's and Skiles' account that does not itself find systematic defense.

One advantage my defense of (NP) enjoys over Correia's and Skiles' is that it does not assume any substantive definition of metaphysical necessity *up front*. My account merely assumes familiar pre-theoretical criteria of metaphysical necessity—that it is a grade of alethic necessity ostensibly weaker than logical necessity but stronger than nomic necessity, and that it seems to have its source in facts about the world and not in trivia such as logical form or the meanings of words. My defense of (NP) shows that there is a class of necessities which are logical consequences of specific generalized identity statements, the general metaphysical principle that such statements are about universals, and a formal necessity, (TIU), where the consequent necessity in question is weaker than formal necessity but still stronger than nomic necessity. Given its relative strength and the fact that it follows from generalized identity statements once the latter are interpreted as about a certain type of entity (universals), such a necessity simply fits the pre-theoretical criteria for metaphysical necessity: it seems to have its source in substantive facts about the world—namely, the natures of things—and not merely in logical truth. No further assumptions about what it is, e.g. that it is *defined* as the logical consequence of some generalized identity, need to be made.

The same is true of my account of why logical necessity implies metaphysical necessity despite their having different sources. It does not presuppose any definition of metaphysical necessity but rather produces a metaphysical explanation for why every logical necessity is also a metaphysical necessity: the sources of logical necessities, formal essences, are entailed by the material essences of things since nothing can have a specific nature without also having a logical form such that it is capable of being the subject-matter of true propositions.

My account *does*, to be sure, rest on a controversial metaphysical assumption, namely, about that essential truths are about the identities of universals (or their instantiation-structures). Correia's and Skiles' account does not need to make any such assumptions about what essences are. This is not, however, an assumption I leave open: I give principled reasons to believe that essential truths are about the identities of universals in §4.

In sum, (NP) may be established by appeal to an account of essence as generalized identity while essence is still accorded a vital role in accounting for it. For in this framework it is the semantic contents of essentialist propositions, specifically the types of entities they are about (universals), in addition to their logical form (generalized identity) and the logical form of universals (that they play a descriptive role), which helps to secure the necessity of essence. Although this demonstration does appeal to two logical (or at least two metaphysically non-substantive conceptual) truths in establishing (NP), namely (LL^{GEN}) and (TIU), it must also appeal to two metaphysically substantive non-logical truths: explicitly to a proposition about the transworld identities of descriptive roles (DIP), and implicitly to the background assumption that premise (1) is to be interpreted as identifying the instantiations of universals. And so Husserl's theory of essence, taken in conjunction with an account of essence as generalized identity, provides the resources for defusing Leech's challenge: it is not inevitable that appeals to essence-as-generalized identity to establish (NP) must either delete the role of essence in generating metaphysical necessity or grasp the circularity of deriving the necessity of essence in general from the necessity of the essence of identity.

5 Objections and replies

We have, then, a roughly Husserlian version of ETM on which the metaphysical necessity of generalized identity can be established without being derived from the logical necessity of self-identity. To this extent, a Husserlian theory of essence offers a means of embracing ETM by recourse to an account of essence in terms of generalized identity that averts the objections raised by Leech. Just so, Husserl provides contemporary proponents of ETM a way to maintain a new and seemingly promising approach to understanding the relation of essence to metaphysical modality in the face of a powerful recent challenge.

5.1 The individual essences objection

Contemporary essentialists may, however, worry that my proposed Husserlian defense of (NP), in applying only to essential truths regarding universals, is insufficiently general to be of widespread use. Many essentialists, after all, hold that individuals can also bear essences, and in the modal tradition, at least, individuals were taken to be the paradigmatic essence-bearers.[34] Husserl's claim that only universals

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[34] As they are in Fine (1994, Fine, 1995a, b).

are genuine essence-bearers is thus contentious, and in any case threatens to limit the appeal of the proposed defense of (NP).

A natural way of removing this worry is by appeal to *haecceities*. The haecceity of an individual a is the property of *being identical to* a. My account may thus accommodate the view that some individuals bear essences by proposing a reformulation of any truth about the essence of an individual a with a truth about the essence of a universal, *being = a* (call it 'h_a'), such that $Ixh_a \equiv_x x=a$. Then a statement like 'a is essentially F' could be analyzed as a conjunctive chain of generalized identity statements: $Ixh_a \equiv_x x=a \land x=a \equiv_x Fa$, which could then, given the transitivity of identity, be collapsed into $Ixh_a \equiv_x Fa$. For example, 'Socrates is essentially human', fully analyzed, will read: 'For something x to instantiate the haecceity *being = Socrates* is, in part, for x to be identical with Socrates, and for x to be identical with Socrates is, in part, for x to instantiate *being human*. Embracing haecceities would require us to weaken (TIU) so that it concerns only multiply instantiable universals, not all universals. Doing so would move us beyond a strictly Husserlian framework, as Husserl gives no indication of whether he would accept haecceities and, in any case, does not acknowledge the concept of a haecceity as a category in fundamental ontology.[35] Yet taking the haecceitistic route is still compatible with my Husserl-inspired defense of (NP). For the crux of my defense is that essential truths are about universals and universals have a distinctive modal feature: they have the ontological form of descriptive roles and are thus invariant in their features across worlds. Haecceities do not have the ontological form of descriptive roles but they still have an ontological form—being indexed to specific individuals, their 'indexes'—which makes them invariant across all worlds in which they exist (all the worlds in which their indexes exist). Accordingly, (NP) will still hold in the case of any haecceitisic statements of the form $Ixh_a \equiv_x x=a$, for such statements will still be true in all worlds at which the haecceities' indexes exist (of which there may be only one). By extension, (NP) will hold for any conjunctive statement of the form $Ixh_a \equiv_x x=a \land x=a \equiv_x Fa$ in all metaphysically possible worlds in the index a exists. To this extent, my account's basic metaphysical explanation for why essential truths generate necessary ones would be preserved in the case of haecceities: essential truths generate necessary truths because they are about universals which have ontological forms that necessitate their instantiation-structures. The forms of multiply instantiable universals are different from those of haecceities, and the details of the explanation, of the precise metaphysical mechanism by which universal's forms necessitate their instantiation-structures, would accordingly vary in the two cases. But the more general explanation for (NP) would remain perfectly intact. And nothing in such an account requires us to take a stand on the vexed issue of whether there can be uninstantiated haecceities or not. One can therefore adopt the Husserlian view that all essence-bearers are universals and reduce the idea of individual essence to that of a haecceity if she wishes to appease the friend of individual essences.

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[35] Thanks to an anonymous reviewer for informing me of the need for elaboration on how my account could accommodate haecceities.

5.2 The trivial necessitation objection

Nonetheless, one might still harbor doubt as to whether the Husserlian account I have developed actually removes Leech's challenge. For they might take the mere *existence* of a proof of $p \equiv q \supset \Box(p \equiv q)$ from the necessity of $\Box(p \equiv p)$ to be what threatens to collapse metaphysical necessity into logical necessity, regardless of whether that proof is what actually establishes (NP) on one's preferred version of ETM. After all, the proof shows that generalized identity is necessary if generalized self-identity is. So, this worry goes, given that generalized identity is a type of identity and self-identity is logically necessary, so, too must generalized self-identity be logically necessary. Then all generalized identity would seem to be logically necessary, in which case the existence of an independent means of establishing (NP), such as our present appeal to the transworld identities of universals, does nothing to remove the difficulty that the metaphysical necessity of (NP) seems to be purely a function of its logical necessity. If so, the heart of Leech's challenge still beats.

In response, I believe that this worry confuses the *epistemic challenge* to justify (NP) with the *metaphysical* challenge of describing the metaphysical mechanism by which essential truths generate or bring into existence necessary ones (including their own necessity). Recall from §1 that, as Correia and Skiles point out, any proof of (NP) meets the epistemic but not the metaphysical challenge. Yet, as I already showed in §3, the reason that my account does not collapse the phenomenon of purely metaphysical necessity into that of logical necessity is that it accords essence an indispensable role in the metaphysical *explanation* of how essences generate metaphysical necessities. Essential truths generate metaphysically necessary ones because (i) they are identifications of universals, (ii) universals have the ontological forms of descriptive roles, and (iii) identifications of descriptive roles are invariant across metaphysically possible worlds. Logical necessity plays no role in my response to the metaphysical challenge: it plays no role in my account of the mechanism by which essential truths generate metaphysically necessary ones.

In addition, essentialists might have reasons to deny that generalized self-identity is logically necessary. That is, not every essentialist will want to accept that $\Box(p \equiv p)$ is a theorem on the best semantic for generalized identity. For although it may seem blanketly counterintuitive to suggest that a statement such as 'For x to be Socrates is for x to be Socrates' is not a logical truth, 1's intuitions on this matter are liable to change drastically, I think, if they hear 'For x to be Ψ' as concerning what is *relevant* to being the same as a thing's being Ψ, not merely what is the same as its being Ψ. Something's being identical with Socrates might be the same as its being identical with Socrates, but it is not relevant to being identical with Socrates, for, unlike 'is human', the predicate '=Socrates' provides no information as to what it is to be identical with Socrates. Consider that, after all, the original impetus for abandoning the reduction of essence to metaphysical necessity was Fine's barrage of counterexamples to it, the moral of which was that *de re* necessary properties that are irrelevant to their bearer's identity are not essential to it (Fine, 1994: 6). A property such as being self-identical certainly seems to fit this description of an irrelevant necessity. Spinelli (Spinelli, 2021b), for example, makes such an appeal to relevance to argue that self-

identity, whether construed generally or specifically, is not essential to objects unless 1's conception of essence is consequentialist or else purely modal.

This being so, an essentialist who takes relevance-for-identity to be a necessary condition of being an essential feature might want to place restrictions on generalized identity, such that '≡' implies *relevant entailment* and/or *explanation* in both directions: $p \equiv q$ is the case, for any p and q, only if q's being true is wholly relevant to or if q's being true *grounds* p's being true. If so, then, far from being theorematic, $p \equiv p$ is false! Correia and Skiles, for their part, expressly deny that the relation between the entities flanking a ≡ relation to need not be one of whole relevance or explanation: for example, it's the case that to for something to be red and round is for it to be red, but it is not wholly relevant to its being red or a ground of its being red (Correia & Skiles, 2019: 657). Correia and Skiles do not, accordingly, build any relevance constraints into their axiomatization of the ≡ relation.[36] But an essentialist might want to do so, especially if she takes generalized identity as an amplification of the notion of a real definition rather than as an alternative to it.[37] For then $p \equiv p$, in virtue of being a generalized identity statement, would have to be definitional for p, and we would have a circular definition. In either case, the necessity of generalized identity does not derive from the necessity of $p \equiv p$; it is not logical necessity. Alternatively, one could invoke Fine' (Fine, 1995b)s distinction between *constitutive* and *consequential* essence (where the former is primitive and the latter is the collection of properties an object had in virtue of its constitutive-essential properties and logical closure) and claim that self-identity makes it into the latter, not the former. The present proposal would then be that only constitutive essence reduces to generalized identity. In either case, there is good reason for the essentialist to impose relevance constraints on generalized identities. And doing so would be another way to remove the worry that we don't need essence to account for the necessity of generalized identity statements.

5.3 The nominalist objection

There will, I suspect, be metaphysicians who are so allergic to the posit of universals that they cannot help but find my Husserlian defense of ETM untenable, notwithstanding the advantages I have claimed for it. I will not attempt here to argue for the existence of universals or defend Husserl's claim that all essential truths concern universals. I take it to be an interesting and potentially fruitful contribution simply to have shown that if you are interested in ETM and have independent reasons to embrace universals, then you have, courtesy of Husserl, a powerful line of argument with which to support your ETM.

Nonetheless, I will try to medicate against such allergies simply by pointing out that if one has already endorsed the view that all essential truths are *generalized* identities, the suggestion that they are about universals does not seem a giant leap to make. Correia (2006) has provided a well-known series of arguments for why generic essentialist statements are not reducible to statements about the essences of individu-

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[36] Thanks to an anonymous referee for pointing this out to me.

[37] Note that Correia and Skiles explicitly deny that, on their account, every statement of essence-qua-generalized identity expresses a real definition, partial or full (Correia & Skiles, 2019: 353).

als (whether the set of all individuals satisfying a generic expression or the set of all objects-qua-satisfying the expression; see Correia, 2006: 759–60). And many essentialists have since adopted accounts of essential truths as irreducibly generic (e.g. Fine Kit, 2015; Kment, 2014; Lowe 2012). If one follows their lead and wishes to give a further account of what entities generic essential truths are *about*, then given that individuals of any type are off the table, universals seem like the most if not the only plausible candidates.

Perhaps essential truths are not about entities at all. Correia argues instead that the concept of generic essence is semantically primitive (Correia, 2006: 764), and Correia and Skiles (2019) claim accordingly that generalized identity statements need hold between entities of any kinds (Correia & Skiles, 2019: 648). Yet we typically use the expression-form Fx to model an individual's bearing of a property, and it is not implausible, to that extent, to construe a generalized identity statement such as $Fx \equiv_x Gx$ as identifying an object's bearing one property with its bearing another. If one adopts this construal and has *also* followed Correia and Fine et al. in ruling out accounts of generic essential truths as concerning individuals, then she is left with the view that to bear a property is to instantiate a universal, and that therefore generalized identity statements concern the instantiation of universals.[38]

6 Conclusion

In any case, my aim, in conclusion, has been to show that Husserl has a novel version of ETM, and a distinction between formal and material essence, which arms contemporary proponents of ETM who also countenance the existence of universals with an effective means of defending their position. My Husserlian defense of ETM depends only upon the view that essential truths are about the identities of universals, which is a natural view to pair with the now-regnant position that essential truths are irreducibly generic in content, and view that properties are individuated by descriptive role, which amounts only the denial of an already exceedingly controversial quidditism, and which I have argued is true in virtue of the very logical role that properties play in generating facts. To that extent, my reconstruction of Husserl's account of essence provides an independently viable theory of modality to take on board, whether you care what Husserl thought or not.

In *Naming and Necessity*, Kripke accuses much of the philosophical tradition of problematically conflating the concepts of universality and necessity while the right modal semantics shows that they come apart. He targets Kant in particular, but superficially his remarks apply just as well to Husserl. If my claims in this paper are correct, however, Husserl's theory of essence, combined with a view of essences as generalized identities, contains the resources by which to demonstrate a systematic connection between universality and necessity, and with this a novel way to defend the essentialist theory of modality against a powerful recent objection to it. I hope to have developed Husserl's suggestive but unfulfilled gestures towards such a demon-

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stration into a compelling account of the necessity of essence. If I have succeeded, then Husserl's theory of essence is not only highly prescient, it offers a metaphysically interesting, live and potentially fruitful option for contemporary essentialists.

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