Committing to an Individual

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COMMITTING TO AN INDIVIDUAL: ONTOLOGICAL COMMITMENT, REFERENCE AND EPISTEMOLOGY (PUBLISHED IN *SYNTHESE*, 193(2), 2016, PP. 583-604.)

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Abstract. When we use a directly referential expression to denote an object, do we incur an ontological commitment to that object, as Russell and Barcan Marcus held? Not according to Quine, whose canonical language has only variables as denoting expressions, but no constants to model direct reference. I make a case for a more liberal conception of ontological commitment—more wide-ranging than Quine's—which allows for commitment to individuals, with an improved logical language of regimentation. The reason for Quine's prohibition on commitment to individuals, I argue, is that his choice of canonical language is heavily informed by his holist epistemology, in which objects are introduced via a description of their explanatory role. But non-holists can coherently attempt to commit to individuals using directly referential expressions, modelled in a formal language as constants. While holding on to the insight that a logical language is a helpful medium for ontology, I propose instead a more permissive language of regimentation, one expanded to permit the use of constants to record attempts to commit to individuals, which allows us to make sense of non-holist theories with alternative name-based or name-and-variable-based criteria of ontological commitment as well as Quinean theories.

1. Ontology, Meta-Ontology, and Individuals

Ontological questions are questions about what there is. When we investigate whether there are persons in the world, or numbers, or a God, or a Higgs boson, we are engaged in the project of ontology. Besides ontology, full stop, we sometimes speak of *someone's* ontology. To find a general strategy to work out what there is according to someone, we must embroil ourselves in language as well as the general study of the world. It is meta-ontology not only in the sense that it is about ontology, but also in the sense that it is a metalinguistic endeavour: to identify the expressions that betray someone's ontological assumptions. Such a set of expressions is hard to pin down. Certainly not every use of a noun or predicate comes with an object attached. After all, nouns and predicates are sometimes used in so-called negative existentials: 'Unicorns do not exist', or 'There is no such thing as Pegasus'. If 'Pegasus' or 'unicorns' carried an implicit imputation of existence or being, such statements would be self-contradictory. Although not every meaningful word stands for a thing, at some point some words, at least in some contexts, will stand for something. If there were no stopping point to the denial of ontological presuppositions, we could never ascribe an ontology to anyone.

Strategies for working out ontological presuppositions have been vigorously debated since Quine proposed his criterion of ontological commitment [30, 37]. The contemporary literature has attempted to cast doubt upon Quine's view by questioning that the ordinary-language quantifier 'there is' carries an existential commitment [50, for example]. But this is likely to terminate in an unsatisfying exchange of intuitions, while more foundational questions are being overlooked, namely: (1) 'What is a helpful way of framing, or attempting to resolve, an ontological dispute?', (2) 'Under what circumstances does someone have good reason to assume the existence of an entity?', and (3) 'Are the standards for having good reason to believe in an entity universal, or theory-dependent?' Parties to an ontological dispute frequently differ not just over what exists, but also over what it takes for some stretch of discourse to impute existence. Because these questions have become so entangled some philosophers, like Azzouni, have gone so far as to say that questions about ontological imputations result in 'philosophical indeterminacy' [3, p. 82]. But I argue such pessimism is unwarranted once we realise that different criteria of ontological commitment, i.e. different standards for imputing existence based on some stretch of theoretical discourse, have clear consequences for the expressive power of our theories and for our epistemology.

In this paper I propose a novel strategy for determining what there is according to someone, which gives due diligence to epistemology. My method will be partly historical, revisiting a forgotten debate between Quine and Barcan Marcus on ontological commitments incurred by different epistemological means: by description and by acquaintance. But my conclusion will be philosophical.

A major gap in the current debate is its failure to recognise that imputations of existence are closely linked with epistemology. A theorist's views on epistemology and methodology impose rational constraints on her ontology. She assumes an object is present because, by the epistemological or scientific standards of her theory, she has good reason to believe in it, because its presence helps her explain phenomena that would otherwise remain unexplained. My answer to (1) above is that ontological disputes are best addressed in a formal language of regimentation, shared by both disputants, which reveals the logical consequences of both their theories. This helps us uncover the underlying logical form of their respective ontological assumptions while minimising bias, vagueness, and ambiguity. The answers to (2) and (3) are interlinked. Quine assumes that there is only one kind of good reason to believe in something. For him, ontological commitments are only ever incurred via a description of the object's explanatory role within the theory. I will present a case against this assumption: it is also possible to impute existence via a directly referential proper name, as Barcan Marcus proposes [18, 19, 20] or via a Russellian logically proper name like 'this', 'that', or 'I' [43]. Such ontological commitments are not made via a description in the scope of a quantifier, but via direct reference, indicating, for these authors, that the objects are known by acquaintance. Quine adamantly refuses to count these as ontological commitments, insisting that they be translated out of his regimented language, and transformed into descriptions in some way. As a staunch global holist, he can only countenance descriptive knowledge. But acquaintance with an object is as good a reason for believing in it as the indispensability of its explanatory role. Therefore both ought to count as ontological commitments. An ontological dispute between a holist like Quine

and a foundationalist like Barcan Marcus can only be resolved or assessed by framing it in a language where both can be represented, without forcing one to submit to the other's standards. I therefore propose a regimented language with constants as well as variables as ontologically committing expressions.

2. Language, Logical Form, and Meta-Ontology

2.1. **Ontologically Committing Expressions.** I define a criterion of ontological commitment rather more broadly than Quine did, as a principle that identifies certain expressions of a theory as the *ontologically committing expressions*. Quine's first-order variables are one example, but any categorematic expression, one whose function in the theory is to stand for an entity, is ontologically committing. When a theorist ventures some ontological statement, she ought to have a good theoretical reason; either she starts believing in something because she finds that she can no longer explain all that is to be explained without invoking such an entity, or she gives up belief in an entity of some description because she finds that her theory can go on perfectly well without presupposing such an entity.

We need not assume, like Quine, that bound variables are the only indication that an entity is being talked about; language forms other than quantification can coherently be proposed as ontologically salient. But it does not follow, as much of the contemporary literature assumes, that we may freely choose any other language form we like—a reality operator [6], perhaps, or an existence predicate [3]. Whether a particular language form has ontological significance depends not on the language form itself, but on whether it is best interpreted as playing the role of an ontologically committing expression within that theory. Here we see one of the most interesting aspects of Quine's meta-ontology, unfairly overlooked: it provides a rigorous strategy to determine what there is good reason to believe in given some theory [11, sections 1-3]. Anyone seriously engaged in proposing a true theory of the world is rationally compelled to accept the existence of those entities she cannot avoid talking about in the best, most complete explanations her theory can provide. The categoremata are the expressions which reveal exactly which entities are being talked about. In her theory, the supposed values of the categoremata play an indispensable explanatory role, otherwise her theory could go on perfectly well without talking about them. Admitting their existence is not a choice, but a theoretical necessity. But, *contra* Quine, the standards for having good reason to believe in the existence of something are not the same for every theory. Instead, it is determined by rational constraints imposed by the theorist's epistemology.

2.2. **Regimentation into a Formal Language.** To pin down someone's existential assumptions, her discourse needs to be systematised to some degree. Determining what objects she has good reason to believe in means concentrating on her best attempts at theoretical discourse, intended to make true, literal, explanatorily useful claims about the world. To find out about her ontology, we work out when she invokes something in her explanations. What does she make reference to? What does she explicitly say exists? What does she tacitly rely upon for the truth of her claims? But there is no clear method that tells us whether a statement of everyday English, taken in isolation, definitively does

or does not invoke an entity. Does it follow from the truth of 'Rome was built on seven hills' that there are such things as hills, or Rome? Perhaps not. An apparently singular referential term like 'Rome' might really refer to many things arranged in a certain way. The sentence by itself gives us no clue whether 'Rome' functions as a genuine proper name of a single object. English does not have a well-defined class of categoremata.

English, Quine and his followers note, is also rife with vagueness and ambiguity. Ordinary speakers can't be expected to avoid all ambiguity and clearly indicate every referring expression, but we can hold our best theories to that standard. To derive a theory's ontological assumptions without ambiguity, we *regiment* the theory: create an improved version of the theory by rendering it—or, as Quineans like to say, *translate* it—into our choice of formal language. Quine's choice is first-order logic [34, ch. 5], though others propose different logical languages. How to decide on an ideal formal language for these purposes partly depends on other theoretical commitments; in Quine's case, for instance, his worries about predicate reference and *de re* modal predication[1] militate against a second-order or modal logic [29, 39]. Another factor is expressive power. Quine wants a language with sufficient expressive strength to encode his own preferred best theory—certainly including current physics—but also alternative theories to which an ontology can reasonably be ascribed. The regimented language helps compare and assess the existential assumptions of creditable scientific theories and realist philosophical theories, such as realism about propositions [25], Platonism [32], theism [26, p. 150], and modal realism [39].[2] Although he has reservations about the content of these theories, he states repeatedly from 1939 onwards that putting them into first-order quantified form is helpful in understanding and assessing them [25, p. 705]; [26, pp. 149-152].[3] Regimentation clarifies them, and also provides strategies for attempting to show that some unwanted ontological commitments are dispensable. To avoid commitment to some φ apparently invoked by a categorematic expression in a true, affirmative theoretical statement, there are only three options: taking 'an attitude of frivolity' [33, p. 103], i.e. denying that this statement *is* a true, affirmative theoretical statement; eliminating all φ-language from the theory; or reduction by paraphrase, showing that all φ-statements are equivalent to statements that do not commit us to any φ. Before deciding on the most useful regimented language, I'll develop some novel arguments in favour of regimentation for ontological purposes that go beyond the familiar Quinean ones of simplification and avoiding ambiguity.

[1]It is a little-known fact that Quine allows for some sense to be made of essence provided it is interpreted as relativised to a theoretical context. For more details and a modern development of this view, see [16, section 4].

[2]For further details, and a defence of Quine's method of regimentation against the claim that it is toothless and equivalent to anti-metaphysical pragmatism or deflationism, see [11, section 3.3].

[3]An anonymous referee for this journal notes that a certain degree of realism must be presupposed for the project of regimentation to make sense, since it is unclear how Quine would treat theories that embrace a strong global anti-realism, or completely disavow the notions of truth or logical form. This is true but, for ontological purposes, not problematic. A theory must already embody some degree of realism, insofar as it must have a determinate logical form aimed at saying something true about some objects in the world, to aspire to an ontology in the first place.

2.3. **The Logical Consequence Argument for Regimentation.** My first argument for regimentation is connected to the fact that ordinary languages, unlike formal languages, do not have determinate model-theoretic consequence relations, or consequence relations of the kind where the logical form of a sentence determines what follows from it [5]; [7, section II.2], which are just the kind that are extremely helpful for settling the ontological implications of a theory. To assess a candidate theory, we need to know about its ontological commitments to the entities it invokes, not only explicitly, but also implicitly. What if a theory that seems plausible on the surface has truth conditions which cannot be fulfilled unless there are some entities whose existence is very implausible indeed? A regimented theory can simply be closed under consequence, collecting all the sentences that follow from it. Once we've got them all together, we look for ontologically committing expressions to reveal their existential assumptions. Although the ambiguity of ordinary language sometimes makes it hard to settle whether one sentence is a consequence of another, for formal languages this is a determinate matter, settled by their logical form. So explicit and implicit ontological commitments come down to the same thing following regimentation: being a logical consequence of the regimented theory.

2.4. **The Irenic Neutrality Argument for Regimentation.** My second argument for regimentation is that the structure of formal languages helps achieve *irenic neutrality*: the ability to represent the ontologies of alternative (realist) theories in a common language. Formal languages are set up such that it is immediately apparent which expressions are categorematic. Some expressions are explicitly assigned elements of the domain as values by the interpretation—variables and constants, in the case of standard first-order logic. Certain expressions—punctuation, truth-functions, arguably predicates [25, 27]—are syncategorematic: meaningful in context, designating nothing. Still, to have ontological commitments at all, a theory must include some categoremata. To use one in a true affirmative context but deny the existence of its referent is to contradict yourself: their use implies an imputation of existence. Formal languages make it easy to identify the categoremata by their surface form: the logical form of each statement that follows from the regimented theory clearly shows whether it contains a constant or variable.

Where a theory is not yet fully regimented, some of its uses of variables might still be dispensable by reductive paraphrase. A sociologist can truly say 'There is a net migration from Mexico to the USA' and deny something called a 'migration' exists. 'There is a net migration from x to y' is just an optional shorthand for its regimented translation: 'more people move from x to y than from y to x'. Apparent commitment to migrations can be paraphrased away by providing a template to demonstrate their equivalence to some part of a longer, more cumbrously expressed, but more parsimonious theory. This rarified kind of 'translation' is a way of transforming an old theory into a new, improved one, with different logical consequences (for instance, the new one doesn't entail that there are migrations). It is unlike ordinary-language translation in several ways; for instance, it need not preserve all the truths of the pre-regimented theory.[4] What successful reductive paraphrases must

[4]Alston and an anonymous referee for this journal object that translations should inherit ontological commitments because the translation relation is symmetric: a sentence and its translation share a meaning

do, rather than preserve full material equivalence between the pre-regimented and the regimented theory, is to ensure that the improved regimented theory does not suffer a loss of expressive power or explanatory capacity. To transform sentences which apparently presuppose migrations into sentences not mentioning them without loss of information or expressive power is to demonstrate the absence of ontological commitment. But if an attempt to paraphrase away φ-language results in loss of expressive power, loss of information, or impaired capacity to explain what needs to be explained, φ-language must have done useful work for the theory. In that case it is unwise to dispense with it.

Easily identifiable categoremata help frame ontological disputes in a way that avoids rigging the debate in favour of either side. Suppose Anne denies, and her opponent Betty affirms, that there are numbers. Anne clearly would not want to describe the situation as 'there are some entities, namely numbers, which I do not believe in', because that is an instance of Moore's paradox: 'p, but I do not believe that p'. Just because she acknowledges that Betty has said something coherent, it does not follow that Anne herself must *refer* to numbers to say that there are no numbers. Quine objects that this would prejudice the debate towards a kind of Meinongianism [30, p. 31], putting the more ontologically parsimonious philosopher—in this case, Anne—in the uncomfortable position of assigning numbers to some umbrageous realm of being-beyond-existence. The logical form of the debate would favour Betty.

Instead, Anne discusses her opponent's ontology by ascending to a meta-language with the expressive strength to talk about semantic features of the object language. Where Anne and Betty share such a language, they can conduct ontological debates from this irenic perspective, speaking only of entities both believe in: linguistic expressions. If Anne knows which of Betty's words are unequivocally categorematic, she'll conclude, whenever Betty uses such a word concatenated with 'is a number', that numbers exist according to Betty. Anne then denies this by stating that 'is a number' applies to nothing, and refusing to affirm any sentence that concatenates 'is a number' with her own referential expressions. Regimentation plus semantic ascent has the irenic function of allowing each of the warring factions to make sense of the other's claims, without relying on a syntactic form that is prejudicial towards one or the other party.

3. Individuals, Direct Reference, and the Regimented Language

Advocates of regimentation frequently differ over their preferred regimented language. I will argue for one with two kinds of ontologically committing expressions: constants and variables. Here I differ from Quine, whose preferred language is bivalent first-order

[1, pp. 9-10]. I reply that ordinary-language translation is symmetric, but translation into the regimented language is not. Since the regimented theory need not even be fully materially equivalent to the pre-regimented theory, *a fortiori* we should not expect to see all of its meaning fully preserved. Regimentation is guided by pragmatic concerns. Ontologists opt for the regimented theory over a natural-language theory, or for one regimented theory (without commitment to migrations) over another (with that commitment) because it performs better on their criteria of theory choice, e.g. explanatory capacity, simplicity, predictiveness, fecundity. The theory which performs best on these criteria, they take it, is the most likely to be true.

logic without individual constants. Theoretical statements about an object, when rendered in first-order form, will contain a variable, an existential quantifier to bind it, and some predicates that are supposed to hold of the value of that variable: their logical form is $\ulcorner \exists x \varphi(x) \urcorner$. The ontologically committing expressions are just the variables: one simple grammatical category. Proponents of alternative regimented languages often add further categories of ontologically committing expressions: plural variables, making plural logic the new regimented language [4, 24], for instance, or predicate variables, which yield a second-order regimented language [47]. All of these still concur with Quine that objects are introduced into a theory as values of variables, the formal equivalent of committing to an object via an existence claim. They differ only in what kinds of variables they admit. But to follow Quine in this regard is to overlook some potential ontologically committing expressions whose logical form is not that of a variable. Theories differ not only in what theoretical statements they contain, but also in how these statements are interpreted and, in some cases, in their methodology. A philosopher's epistemological and methodological views constrain her theory's range of admissible statements and their interpretations; one such interpretive question is which expressions are taken as categorematic, as ontologically committing expressions.

Barcan Marcus and Russell take themselves to incur ontological commitments by using either a genuine, directly referential, proper name, or a so-called logically proper name like 'I', 'this', or 'that'. The semantic role of a proper name or logically proper name is to stand for an object. Using one in a true, affirmative context implies an ontological commitment to a referent. Quineans often say we can't understand 'there are things that don't exist' except as contradictory [49, 15]. Attempts to conjoin simple affirmative atomic sentences containing proper names or logically proper names with non-existence claims are similarly incoherent: think of someone saying 'This is Maryam, but she doesn't exist'. The inherent contradictoriness of 'I think, but I do not exist' is the very foundation of Descartes' *cogito*. 'I do not exist' cannot be truly uttered, and I am therefore ontologically committed to my own existence [9]. This does not entail that we can never dispense with an apparent directly referential ontological commitment. Our options remain the same: deny that the statement it occurs in is a true theoretical claim (frivolity), omit the apparent name from our theory altogether (elimination), or show that it is not a genuine proper name, but a dispensable shorthand for some non-committing construction (reduction by paraphrase). Directly referential expressions in true, affirmative, non-reducible theoretical claims imply a commitment to an individual. And their most interesting feature for our purposes is that, unlike Quinean ontological commitments, they can do so without describing the individual.

The solution appears straightforward: use a first-order language with variables and constants as the regimented language. The latter represent names, the former the pronouns in existence questions; both are ontologically committing expressions. We can incur ontological commitments to objects both via quantification and via direct reference using proper names, personal pronouns or demonstratives. Reasonable though this suggestion may seem, Quine explicitly denies it. He is adamant that the regimented language is first-order logic *without individual constants*, citing reasons connected to his philosophy of logic. A better explanation, I will argue, is that his regimented language is not as irenic as we

might like. It is subtly prejudiced in favour of Quine's own holist epistemology. He cannot see any way of introducing an object into a theory except via describing its explanatory role within that theory. This epistemological constraint, not logic, rules out directly referential expressions, which allow for commitment to an object without describing it.

4. Regimented Languages with Directly Referential Ontologically Committing Expressions

Although Russell inspired in Quine the idea that ordinary proper names are definite descriptions in disguise, he never subscribed to Quine's thesis that only variables in the context $\ulcorner \exists x \varphi(x) \urcorner$ are ontologically committing. He maintained that there are also logically proper names: 'I', until he gave up belief in the self [44], 'this' and 'that'. Yet it isn't completely apparent that we can attribute to Russell a criterion of ontological commitment to rival Quine's, encapsulated by some slogan like 'to be is to be the value of a variable or a logically proper name'. His theory of descriptions can lay some claim to being a Quinean precursor, since it helps explain whether the underlying logical form of a sentence does or does not demand a corresponding entity [42]. But it is unclear what the regimented language would be in Russell's case. He makes strides towards a coherent, universal philosophical language which explains dispensability in terms of the notion of an incomplete symbol [42], and has metaphysical considerations in mind when proposing type theory [45]. But this includes higher-order variables, and it is not uncontroversial that these play the role of ontologically committing expressions in Russell's theory. Quine, for instance, thinks they embody a use-mention confusion [38, p. 66], and Sainsbury reads them as substitutional [46, pp. 287-295].

4.1. **Barcan Marcus' Name-Based Regimented Language.** A clearer rival to Quine's criterion of ontological commitment is offered by Barcan Marcus, usually overlooked as it is interwoven with her work on modality. She does not discuss demonstratives or the first person—her logically proper names are ordinary proper names. She clearly identifies them as ontologically committing expressions, and for epistemological reasons. An inveterate nominalist, she believes that in our investigations of the world we encounter individual things, but never properties, numbers, or other abstracta. Scientific languages need directly referential expressions, known as tags, to denote individuals [18, 20]. As there are no abstracta, our predicates, number words, *etcetera* must be interpreted as non-committing expressions. Barcan Marcus' flavour of nominalism, unlike Quine's, involves knowledge by acquaintance, direct cognitive access to individuals. Our minds reach out and touch them independently of how they are described. Direct reference allows us to speak of *them* without relying on a description of their characteristics: 'Proper names have a logically irreducible use. They permit us to entertain a separation in language of the object under discussion from its properties' [22, p. 107].

It seems natural to think of both reference by means of proper names and existence claims as capable of incurring ontological commitments. Quine aims to paraphrase away names in terms of existential quantifiers, turning 'Pegasus' into the Russellian description 'the pegasiser' [30, p. 27]. Barcan Marcus, by contrast, deftly turns Quine's eliminative

strategy on its head. Her criterion of ontological commitment is 'to be is to be the referent of a tag': only directly referential names are ontologically committing expressions. Where Quine dispenses with names using quantifiers, Barcan Marcus dispenses with ontologically committing quantifiers using names. Her interpretation of the quantifiers is substitutional: their truth is explained in terms of their substitution instances. Variables are not ontologically committing: they do not have values, but substituends [19, 20]. She considers her substitutionalism a natural match for her nominalism, and so she can be read as having a determinate language of regimentation: first- or second-order modal logic with individual constants to model the tags and a substitutional reading of all quantifiers and modal operators (world-quantifiers) [21].[5]

Although Barcan Marcus' arguments for directly referential ontological commitment are compelling, her substitutional quantification is elegant but limiting. It reduces quantified phrases to lists of substitution instances. But lists, and names in standard first-order syntax, must be denumerable. The list of ontological commitments of a Barcanite language is composed of the referents of its tags, so it will never have a nondenumerable cardinality. Her nominalist sympathies lead her to embrace this consequence of her views [23, p. 27]; [20, p. 124]. But those of us who don't want to have our ontology forcibly capped in this way are thrown back upon objectual quantification.

4.2. **A Hybrid Regimented Language.** If we nevertheless take Barcan Marcus' tag theory of ontological commitment seriously, it makes sense to incorporate her insight by combining her ontologically committing expressions with Quine's. We have returned to the proposal of taking a familiar first-order language with variables and constants as a hybrid regimented language. The semantic role of constants is to take values from the domain assigned by the interpretation: they are categoremata. They are ontologically committing expressions, since their semantic role is always to denote an entity. If they are used correctly, in a true, affirmative context, they will stand for something.

Quine, seemingly unaware of Barcan Marcus' epistemic motivations, remains unconvinced, arguing vigorously for the dispensability of direct reference without mentioning epistemology. Proper names, he insists, must be translated into the regimented theory as definite descriptions. 'Pegasus' becomes 'the unique thing that pegasises' [30, p. 27]. But this is to disregard Barcan Marcus' epistemological aim: to make room in the regimented language for ontological commitments incurred via knowledge by acquaintance. Suppose Anne and Betty differ over the existence of certain entities which Anne believes she can refer to directly, taking herself to have knowledge by acquaintance of them. Betty, who believes only in knowledge by description, denies their existence. Both are describing their own views coherently. Quine sometimes expresses the irenic sentiment that it is perfectly

[5]For Quine and Barcan Marcus both, their choice of logic and regimented language is informed by their criterion of ontological commitment: Quine's logic eschews constants, since he takes only variables to be committing, and Barcan Marcus interprets quantification substitutionally because she thinks the only ontologically committing expressions are names. This contradicts Azzouni's claim that choosing a criterion of commitment has 'no significant effects whatsoever' for the choice of logic [2, p. 10].

possible to differ coherently over ontology, semantic ascent revealing who endorses the existence of which entities by means of bound variables [30, p. 31]. But although Anne and Betty's differences are coherent, too, Quine's regimented language cannot accommodate Anne unless she first translates out her own ontologically committing directly referential expressions, even though she is using them for principled reasons to do with her own epistemology. The advantage of a hybrid regimented language is that irenic neutrality can be achieved by translating Anne's and Betty's discourse into a shared language containing both constants and variables as committing expressions. Anne's theory will be regimented using constants, Betty's using only quantified phrases. Again we can ascend to the metalanguage, quote utterances containing committing expressions, and identify both parties' ontological commitments whenever they use either a constant or a variable.

5. Quine's Dispensability Thesis

Quine objects to our use of names, claiming they can always be replaced with descriptions without loss of information; any name 'a' is convertible into a predicate 'Ax', where 'Ax' is satisfied only by the object formerly named a [34, pp. 176-9]. Let us call this the *Dispensability Thesis*. In a sense, it is descriptivist, providing a recipe for converting names into definite descriptions. Still, it isn't ordinary descriptivism—Kripke's 'Frege-Russell' theory of proper names [13, p. 27]—which is a theory about the meaning of natural-language proper names, *viz.* that their meanings are definite descriptions. Quine's descriptivism is an eliminative strategy used to excise an entire grammatical category from the regimented language, which he apparently takes to be analogous to elimination or paraphrase.

In section 2, I argued that to eliminate or paraphrase away φs from a regimented theory, it must be the case that φ-language can be dropped in all contexts, without loss of expressive strength or explanatory capacity. If some information or expressive power is lost, the theory is rendered weaker, less explanatory. But where a stronger theory is the result of using φ-language, φs are not obviously eliminable. After introducing Quine's arguments for his eliminative strategy, in the next section I will show that it results in impaired expressive power compared to my hybrid regimented language. Directly referential committing expressions are not eliminable: they provide a small but significant increase in expressive power that can help encode information that would otherwise be inexpressible, such as distinguishing two descriptively indiscernible things.

5.1. **The Argument From Empty Names.** Quine's first argument for the Dispensability Thesis is that we must avoid imputing an existence claim to uses of so-called empty names—like 'Pegasus'—often deployed to make non-existence claims. If they were genuine names occurring in true sentences, an existence claim would be entailed by Existential Generalisation, thus invalidating those apparently true non-existence claims. But if we convert 'Pegasus' into 'there is exactly one thing which pegasises', the problem goes away. Because nothing pegasises, 'Pegasus does not exist' comes out true.

The mere fact that replacing names with descriptions provides a convenient treatment of some empty names, like 'Pegasus', does not imply that all names should be given this

treatment. Even if this is the correct regimentation of fictional names,[6] it does not follow that it is the right treatment of referential names. Perhaps the correct course of action is some kind of disjunctivism about names: known empty names go into the language of regimentation as predicates, referential ones as constants. Admitting that some uses of directly referential expressions are ontologically committing is in no way equivalent to thinking that *all* apparent names in natural language should be translated as ontologically committing expressions. We need not render every apparent name as a constant in the language of regimentation any more than we have to regiment every natural-language 'it' or 'there is' as 'x' or '$\exists$'. Apparent names are capable of being paraphrased away or eliminated just as much as apparent pronouns or quantifiers. The threat of empty names by itself does not justify dispensing with all direct reference.

5.2. **The Argument from Quine's Philosophy of Logic.** Quine's other argument turns on his philosophy of logic, and recurs several times throughout his published work [26, p. 149], [38, pp. 25-26]. Logic, he avers, has no use for constants; names are a dispensable grammatical category. 'Fa' is equivalent to '$\exists x(a = x \wedge Fx)$': the latter can be substituted for the former wherever it occurs. So 'a' is dispensable except in the context '$a =$', which can be written more concisely as 'A'. Using that convention, 'Fa' is equivalent to '$\exists x(Ax \wedge Fx)$'. The typical use of a proper name is to uniquely specify an object. But, by hypothesis, the new predicate 'A' does exactly that. This amounts to a general strategy for dispensing with names efficiently and in all contexts. There is an air of sleight of hand about this argument which we will soon uncover, but it is just a tidy formal equivalent of writing 'the pegasiser' instead of 'Pegasus'.

6. Against the Dispensability of Direct Reference

6.1. **Is 'the pegasiser' a Bona Fide Paraphrase?** Quine thinks of his strategy for excising names from the syntax as exactly analogous to reductive paraphrase, where some strategy is given for translating away apparent quantification over φs without loss of information, thereby showing that there is no need for φs in the ontology. The Dispensability Thesis might strike logicians as acceptable because of a superficial resemblance to the simplification of logical grammar achieved by replacing five truth-functional connectives with, for instance, the Sheffer stroke. But there is a major disanalogy. Choosing a one-connective over a five-connective system does not dispense with truth-functions as such. The two systems are exactly equal in expressive power, and provably so. This is less clear, and certainly not provable, for languages where the Dispensability Thesis holds versus those with proper names. The 'pegasising' strategy can only provide a faithful translation of theories with constants if there really is no loss of expressive strength. Does 'the pegasiser' by its very nature uniquely single out only Pegasus, never applying to anything else? That is, does 'pegasising' preserve all the expressive power of the proper name 'Pegasus'? It may appear

[6]Though this is denied by Lewis and van Inwagen, both avowed Quineans about commitment. Lewis thinks fictional names refer to possibilia [14], van Inwagen thinks that fictional, or at least meta-fictional, statements carry ontological commitments to abstract objects [48].

that way. But appearances are deceptive. Quine makes clear that he'll accept any description that happens to apply only to Pegasus if it applies to anything as an eliminative paraphrase. 'Pegasising' is only a last resort:

> 'If the notion of Pegasus had been so obscure or so basic a one that no pat translation into a descriptive phrase had offered itself along familiar lines, we could still have availed ourselves of the following artificial and trivial-seeming device: we could have appealed to the *ex hypothesi* unanalyzable, irreducible attribute of *being Pegasus*, adopting, for its expression, the verb "is–Pegasus" or "pegasizes".' [30, p. 27]

Here we find two strategies to paraphrase away proper names. The first is by brute force: the predicate 'x pegasises' is simply declared equivalent to 'x is Pegasus'. The other is to delete any occurrence or variant of the name 'Pegasus' and offer a 'pat translation into a descriptive phrase': a Russellian description containing an open formula satisfied only by Pegasus if it is satisfied by anything, like 'the winged horse captured by Bellerophon'. Both lead to impaired expressive power compared to a language with constants.

First, note the ambiguity in the brute force method: is 'x is Pegasus' equivalent to 'x = Pegasus', where the 'is' connotes identity? Or is it, rather, a new primitive predicate, with 'is' playing the role of a copula? Either disambiguation, I argue, falls squarely into one or the other horn of a troubling dilemma. Eliminating names either involves covertly recycling them, which is not so eliminative after all. Worse, it is incompatible with Quine's epistemology and his account of theory formation, and leads him into circularity. Or it really is eliminative, but in that case, as in the case of the 'pat translation' method, its concomitant loss of expressive power results in blurring the distinction between identity and indiscernibility. Either way, a hybrid regimented language which avoids these problems is preferable to Quine's.

6.2. **Loss of Expressive Power 1: Descriptivism by Any Other Name.** First, let us consider the brute force method, according to which 'pegasises' is a predicate whose underlying logical structure is 'x is Pegasus'. Quine wavers on the question whether the 'is' here is the 'is' of identity [38, p. 25], or a copula [34, p. 179]. Suppose the logical form of 'Ax' is '$x = a$' (the *Philosophy of Logic* view). Then it is difficult to maintain that everything expressible using names is expressible using 'pegasising'-predicates without loss of information. A Quinean theory cannot be committed to a via direct reference, but at most to something which satisfies some open formula that applies only to the object formerly named 'a'. Such is the status of 'pegasises' (or so it seems) if it is exactly equivalent to '= Pegasus'. But examining Quine's view of identity unveils his sleight of hand: it is not a logical predicate meaning 'is the same thing as' but a dummy predicate, a 'serviceable facsimile', shorthand for indiscernibility with respect to all the predicates of the theory [38, p. 63]; [35]. So '$x = y$' is equivalent to 'x satisfies all and only the same open formulae as y'. Again, Quine claims to have proposed this analysis wholly for philosophy of logic-related reasons, while it is actually closely tied to his epistemology. He states its function is to avoid dedicated logical ideology, to support his substitutional view of logical truth as preserved under all substitutions of ideological vocabulary. Another underlying motivation,

though, concerns the epistemological role of criteria of identity. Where two objects share exactly the same descriptions, they're declared identical by holists like Quine, since they share the same explanatory role [31, pp. 65-6]; [11, section 4].

Assuming facsimile-identity, 'x pegasises' means 'x satisfies all and only the same open formulae as Pegasus'. But what is 'x is identical with Pegasus' or 'x satisfies all and only the same open formulae as Pegasus' to connote unless something has already been named 'Pegasus'? Predicates containing a proper name as a constituent crucially rely on the name's having a referent before the predicate is formed. They cannot get off the ground unless an assignment of names to bearers has taken place. As Barcan Marcus puts it: 'Such devices do not *eliminate* the name; they recycle it' [23, p. 211, her emphasis].

Could Quine salvage name-recycling predicates by appealing to natural-language names which are directly referential, later to be regimented away? Not without doing violence to his own epistemology. According to him all languages, formal and natural, share a common structure. All are built up in several stages in the following way. First, speakers label features in their experience using observation sentences: 'Tree'; 'Green'; 'Rose'; 'Red'; 'Rabbit'; 'Furry', *etcetera*. The next stage consists in their being linked by truth-functions, and finally speakers differentiate patterns within the observations. 'Red. And Rose' might be true if there is a red sunset and a pink rose—but 'This is red and it is a rose' is true only when redness and rosehood overlap. When there is recurrent evidence of such overlap we posit an object on the intersection via the use of a variable: 'it', or its formal equivalent, 'x' [40, p. 24]. Objects are just values of variables, introduced descriptively. They are theory-laden, not things we can encounter and give names without any prior theory. Any natural language with directly referential resources has a structure which differs quite radically from Quine's template, allowing for names to be assigned directly to objects, without descriptive intermediary. Preserving his account of theory formation would mean abjuring directly referential proper names even in informal languages, and endorsing full-blown (Frege-Russell) descriptivism about natural-language names too.

Ordinary proper names, then, need a description to mediate their assignment to a bearer. But name-recycling predicates, by their very structure—'$x = a$'—need 'a' to have been assigned a referent before they themselves can be formulated. A descriptivist trying to use one as a uniquely identifying predicate would find herself mired in a Catch-22 situation. The name must have been assigned a referent for the predicate to be formed, but descriptivism stipulates that assignments of names to referents cannot take place without some prior description of the referent. So some expressive power is lost when a language with constants is translated into a language where Quine's Dispensability Thesis holds sway.

Suppose, instead, that the 'is' in 'x is Pegasus' is not the 'is' of identity, but a copula [34, p. 179]. Then 'is Pegasus' is a brand new primitive predicate, 'Pegasus' having taken on the role of a general rather than singular term [36, p. 238]. In this case, it is far from clear that Quine is entitled to assume that this predicate has the strength to apply exclusively to the object formerly named a. If 'a' is a constant, this expressive strength comes with the job: standing exclusively for one object is just what constants do. That a first-order constant refers to only one thing is a semantic fact, dictated by the standard interpretation of items of that logical form. But a predicate's being satisfied by only one

thing is a mere coincide from a logical point of view, certainly not a logical fact dictated by its semantic role—except, of course, where the predicate in question is '$x = a$', but that is supposed to have been ruled out here. As Hochberg puts it: 'How can one, looking at two things, determine whether one of them trumanizes—without covertly or overtly defining "trumanizes"?' [10, p. 558]. That is, what could the criterion of application be for predicates of the form 'x is a'? Either they are actually, covertly, equivalent to '$x = a$', or they do not have any more expressive strength than any other predicate.

6.3. **Loss of Expressive Power 2: Identity vs. Indiscernibility.** By now it has become clear that Quine cannot preserve the exact expressive strength of '$x = a$'. Equivalence relations are key to the precise way in which Quine's regimented language has less expressive power than my hybrid one. He has to try to eliminate names via an undefined primitive predicate or via a pat translation into an ordinary descriptive phrase. One of Russell's insights when he developed the theory of descriptions was the relative strength of equivalence relations that can be expressed using names and variables on the one hand, and descriptions on the other. Directly referential expressions—variables and names—can legitimately be concatenated with the identity predicate. It is true or false *tout court* that $a = b$, that a and b are the same thing. Descriptions cannot flank the identity sign; their deep logical structure is quantificational. In natural language, we think it makes sense to write 'The last pharaoh = the eldest daughter of Ptolemy XII Auletes'. But its true logical form is '$\exists x((Px \wedge \forall y(Py \rightarrow x = y)) \wedge \exists z(Dz \wedge \forall w(Dw \rightarrow z = w)) \wedge x = z)$', with only variables on either side of the identity predicate.

Barcan Marcus stressed in her early papers on the subject that this feature of the identity predicate is no grammatical artefact, but a vital component of a philosophical treatment of identity. Identity is that relation which only ever holds between an object and itself, expressible only by directly referential means: using 'x', or 'z', or (for Barcan Marcus, not Russell) 'Cleopatra'. Identity cannot be expressed via descriptions. Descriptions single out objects *indirectly*, by specifying some condition in terms of the ideology, the vocabulary which ascribes characteristics to objects [18, p. 12]. The object is not denoted directly, *qua* self-identical individual, but only *qua* satisfying the descriptive condition: by having the relevant characteristics.

Meeting a descriptive condition is never a guarantee of uniqueness, or being the same identical thing. Two descriptions, even highly detailed ones, sometimes coincidentally hold of one unique thing. Directly referential expressions, according to Russell and Barcan Marcus, are different because they encode no information at all. Were they to retain some descriptive meaning, their singling out their values would be conditional upon those values' satisfying those descriptions. The strongest equivalence that could be expressed using such expressions would not be identity, but a weaker equivalence: having the same characteristics as specified in the descriptions, i.e. some form of descriptive indiscernibility. Descriptions pick out their objects by means of some of the object's qualities, and only serve to express qualitative, not quantitative, identity. Directly referential expressions, though, are purely ontological expressions, not containing ideology. So it is no coincidence, but a matter of logic, that such words, once assigned to one and the same object, always

denote that same object. They can be used to commit to an individual without reliance on an intervening description, and to state outright whether individuals are quantitatively identical or distinct.

For present purposes—assessing proposed regimented languages—we don't need to settle whether anyone ever really refers to anything directly, without relying on any descriptive content. All we need to know is that some philosophers (Barcan Marcus, Russell) do attempt to express ontological commitments in this way, which squares with their own epistemology. Irenic neutrality demands that a regimented language which provides the option of rendering them as legitimate ontological commitments is preferable to a Quinean one on which such attempts are not expressible at all. Allowing constants in the syntax does not mean that using them is mandatory. Perhaps there is no direct epistemic contact with anything. But that should be a matter of *a posteriori* discovery, not, as Quine would have it, a consequence of the very syntax of the regimented language. Russell and Barcan Marcus' insight is incompatible with Quine's treatment of identity. Instead of a logical predicate expressing the logical relation of *being the same thing*, we saw that he renders '$x = y$' as 'x satisfies exactly the same open formulae as y'. He combines this view of identity with the Dispensability Thesis, regimenting 'a' as 'the A-er'. Put the two together, and Quine is compelled to regiment '$a = b$' as 'the A-er satisfies exactly the same open formulae as the B-er'.

This is where the trouble sets in. Everything satisfies all the same open formulae as itself, of course. But, per the Russell-Barcan insight, that is a weaker equivalence than '$a = b$', which means that a and b are the same thing. 'The A-er satisfies exactly the same open formulae as the B-er' does not mean, nor even entail, that the A-er and the B-er are the same thing. Even in cases where the A-er and the B-er are, in fact, numerically identical, it means no more than that 'the A-er' and 'the B-er' happen to describe the same thing. The fact that two descriptions describe the same thing could be a coincidence—which makes this case completely unlike that of self-identity [21, p. 197]. The identity of identicals is a logical fact.

By contrast, it is always at least logically possible that indiscernibles are distinct. No matter how numerous and precise the (non-name-recycling) predicates are, they will never guarantee that whenever x and y satisfy exactly the same open formulae, it is a logical fact that they are the same thing. That would only be true if conjoining the regimented version of the sentence 'x and y are indiscernible' with '$x \neq y$' were formally contradictory [41, p. 31]. For the standard identity predicate, in a language with purely referential expressions (constants or variables), a contradiction can never be derived from the supposition that indiscernibles are distinct. The only way this can be done is by fiat, where the identity predicate is defined away, replaced with Quine's facsimile of indiscernibility within the language, or where there are no directly referential expressions available. It is true, as Quine says, that such distinctness cannot be expressed within his constant-free, facsimile-identity language. But that is just to say that there really is some loss of expressive power when theories in formal or informal languages with directly referential expressions and identity are translated into languages with only descriptions and facsimile-identity. So this

amounts to another argument against his choice of canonical language, and in favour of one with constants and identity.

By now it is apparent that Quine's elimination of the grammatical category of proper names is not a non-partisan strategy. It represents proper names as reducible to descriptions because of his own preference for objects introduced via descriptions of their explanatory roles. It results in a problematic treatment of identity where some of the strength we've come to expect from natural-language identity claims—that indiscernibles can be distinct, but identicals cannot—has been elided. Although Quine admits that identity in the home language means sameness of object [34, pp. 114–118], he is unable to express 'same object' in that sense in his regimented language.

7. Epistemology and Translation into My Irenic Regimented Language

Part of the point of regimentation, I argued above, is its irenic function: we demystify ontological disputes by translating theories into regimented form, then ascending to the metalanguage and identifying their ontologically committing expressions. Going metalinguistic means the warring factions can avoid talking past each other in the object language, engaging in the pointlessly Meinongian project of stating which objects they each refer to, and then trying to assess which of those objects really exist. But by confining regimentation to an idiom that reflects his own epistemology, Quine risks having non-holist parties to the debate being forced to talk past each other still.

Quine's regimented language provides no way in principle of representing knowledge by acquaintance, or identity which is not reducible to indiscernibility. But even holists whose own epistemology rules out the possibility of acquaintance should admit that others believe in it. Non-holists' views may or may not be true, but they are not meaningless or logically incoherent. Yet Quine's language can only model knowledge by description, via some characterisation of an object's theoretical role, because variables are the only ontologically committing expressions. A hybrid language provides resources to express knowledge by acquaintance—constants to represent proper names or logically proper names—as well as description. Which of these a philosopher then helps herself to is a matter of her epistemology, not syntax.

7.1. **Global Holism.**

Quine's preference for a logic without constants, we have seen, is anchored in his holist epistemology. Global holism implies that thought reaches out to objects not directly, but always descriptively, via the medium of a complete theory. Knowledge of objects is not achieved by touching upon the objects themselves, but by considering their place within the theory. Theories which are governed by a holist epistemology along these lines do not allow for knowledge by acquaintance. Translation into the hybrid language of regimentation is nevertheless perfectly possible: we just translate all of their statements into descriptive form. Individual constants are never used in the regimented version of a global holist's theory. It features only variables as ontologically committing expressions. All objects in such theories are introduced via a description of their explanatory role. As a result, such theories will generally also have, like Quine's preferred theories, some global criterion of identification for descriptively indiscernible objects. A holist is only entitled to

assume the existence of something insofar as it plays some explanatory role for her theory. So she will not be entitled to assume two distinct posits that fulfil the exact same explanatory role—in this case the two would be identified. Although it remains logically possible that such indiscernibles are distinct, global holists cannot have good reason to distinguish two objects that share the exact same explanatory roles, due to the constraints of their own epistemology.

7.2. **Foundationalism about Objects.** On the opposite end of the epistemological spectrum from global holism is foundationalism. The doctrine of knowledge by acquaintance is a special kind of foundationalism: a foundationalist attitude towards knowledge of objects, of which Barcan Marcus is a clear exponent. Knowledge of objects, on this view, need not be inferred from anything. Our minds just reach out to the objects themselves: they are encounterable independently of a prior theory. Barcan Marcus takes this epistemic attitude to be the best match for her version of classic nominalism. Her substitutional quantifiers can be encoded into the hybrid regimented language as virtual quantifiers [28, pp. 218-223]; her proper names as directly referential constants. These enshrine in language a cognitive act of direct contact with an individual. Their semantic role is to single out an object, without conveying anything about what is true of that object. It follows that directly referential expressions have only referents and no lexical meanings.

This concerns the issue of how to incorporate directly referential expressions into the language of regimentation; it need not be a thesis about natural-language proper names. Constants in the regimented language have different properties from natural-language names: for instance, typographically identical constants are all considered to be the same name, and only apply to one thing. By contrast, more than one person can be called, say, 'Jennifer' in ordinary language. Regimented constants are an idealised case. The ontological point of direct reference is to allow us to commit to an individual without relying on the ideology. Direct reference also allows us to make identity claims that are not reducible to some weaker equivalence like indiscernibility. Objects that fulfil all and only the same descriptions, though descriptively indiscernible, may still be discernible via acquaintance, direct perception, or ostension, represented by a constant or logically proper name.

Russell held that acquaintance with an object entails no propositional knowledge of it at all, by contrast with knowledge by description, which does carry propositional information in its wake [43]. Perhaps an acquaintance-only epistemology along the lines Barcan Marcus proposes is rather limiting. As noted above, the cardinality of its ontology can at most be denumerably infinite, and possibly not even that. And Russell's doctrine of knowledge without information perhaps seems unattractive: can we really know something, and yet know nothing about it? Nevertheless, it is vital to remember that the language of regimentation should be able to represent coherent ontological disputes, and those involving knowledge by acquaintance are certainly coherent. A logical grammar that refuses to represent it at all will not do. To make Russell's and Barcan Marcus' positions seem more tenable, it is also worth considering that there is at least one limited but philosophically interesting class of entities where something like the doctrine of acquaintance without information applies: mental entities, selves and mental states, whose defining characteristic

is often said to be just that we know them first-personally, by privileged access. So it still seems advisable to have some way of representing direct access to objects in language, in particular by adding constants to the regimented language.

7.3. **Foundherentism about Objects.** A more attractive position for philosophers who have reservations about both Quine's and Barcan Marcus' views is an intermediate attitude towards our epistemic access to objects. As there are object-holists and object-foundationalists, there is also an analogue of Haack's foundherentism [8]. Some temporal parts of Russell might be seen as forerunners here, and possibly also Kripke [12, pp. 380-381]. A foundationalist criterion of commitment would have it that both constants and variables are committing, because both acquaintance and description are legitimate ways for thought to reach out to an object. Those who admit only acquaintance or only description must think that every object is accessed in the same way. But foundationalists believe that some objects are accessed directly (mental states, perhaps) and some only descriptively (such as sets, which we know only via proofs). A combination of methods is also possible. Some objects are not presented to us directly, encounterable without prior characterisation, but are perceptible, or knowable by introspection, only under some description belonging to a background theory. For instance, knowledge of another person might involve direct perception of her face, but also some conceptualisation of persons, including their having spatiotemporal bodies with certain persistence conditions. This in turn provides evidence for knowledge of her mental states, which we obtain in part by relying on a further set of psychological conceptualisations, and in part by extrapolating from our own mental states, which we know directly, by introspective acquaintance.

Readers who feel dubious about these particular cases should feel free to substitute their own favourite examples of knowledge by acquaintance, description, or a combination of the two. My point is just to elucidate that a hybrid regimented language facilitates dialogue about these different ontologies, because it can represent them all without epistemological prejudice. Some philosophers of mathematics, like Maddy, have proposed that direct perception is involved in mathematical cognition [17]. Behaviourists believe that our own mental states are known to us only by description. But the hybrid canonical language can make sense of all of these, using constants or descriptions to indicate what kinds of cognitive access are at work within these particular theories.

8. Conclusion: Expanding the Language of Regimentation

We should seek to liberate ontological commitment from Quine's built-in epistemic constraints, using a hybrid regimented language which accommodates realist theories with a range of different epistemologies. Unlike Quine's choice of regimented language, mine does not rule out direct epistemic access to objects by grammatical fiat, but allows for knowledge by acquaintance to be represented via constants, alongside knowledge by description represented in the traditional Quinean style, by existential quantification with variables as the committing expressions.

We might discover that no knowledge by acquaintance ever occurs, and that constants need not be used at all. But our language of regimentation should provide the option

of representing directly referential attempts at ontological commitment. It is a defect of Quine's that such attempts at direct commitment are simply ungrammatical. Alternative accounts of ontological commitment, after all, have been formulated already—most clearly by Barcan Marcus, who takes a foundationalist line allowing only for directly referential ontological commitments. The advantage of a quantified canonical language with constants is being able to translate holists', foundationalists' and foundherentists' theories into a shared language. Regimentation renders the holist theories using only quantified phrases, foundationalist and foundherentist theories as using constants. In that way, it shows their ontological disputes to be coherent and their difference to lie in their epistemological views about knowledge by description and acquaintance.[7]

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