

Time and Modality in Hegel's Account of Judgment

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1. INTRODUCTION

At the outset of the twentieth century, Bertrand Russell championed breakthroughs in formal logic that had gathered pace during the later part of the nineteenth, especially with the work of Gottlob Frege. Russell argued that this new, properly scientific, approach to logic had finally broken the grip of the Aristotelian *term* logic that had dominated philosophy for over two millennia, and that, he claimed, had adversely shaped metaphysical thinking (e.g., Russell 1914, 48)). Very crudely, the Aristotelian tradition had assumed a subject–predicate conception of judgment structure, thus restricting predication to that of one-place predicates and preventing the logical representation of relations *between* objects. Such a limited conception of predication was, in particular, behind the idealist metaphysics that had recently dominated Cambridge philosophy, based on the idea of an “absolute” substance that was the ultimate subject of *all* predication. This logic and metaphysics, he went on, had been most clearly on view in the philosophy of Hegel, who had strongly influenced the British idealists. But following Frege, one could start with the idea of a *proposition* as primary, and removing substantive terms come up with a multi-placed conception of predication. While in fact there had been anticipations of such an approach in the earlier history of logic (Redding 2007, 3–7), Russell tended to present this as an entirely new development.

Historically, Russell's elimination of Hegel from serious subsequent consideration among analytic philosophers turned out to be exceedingly successful, however the weaknesses of the position from which Russell diagnosed the problems of Hegel's logical thought would soon emerge. Russell had construed the new logic to be employed in the radical renovation of metaphysics *extensionally*, but soon after the publication of the first volume of *Principia Mathematica*, the adequacy of the principle of extensionality *for the understanding of logic itself* would be brought into question by C. I. Lewis (Lewis 1912, 1914). Lewis, who had studied logic with Josiah Royce, the prominent American “Absolute Idealist”, argued that the extensionality behind Russell's conception of *material inference* could not capture the full meaning of the concept “infer” as used in science. In order to

capture the *necessity* implicit in this concept Lewis went on to introduce the first modern, systematic study of *modal logic*, the logic of necessarily and possibly true judgments (Lewis 1918). Moreover, Lewis would also underline the historical connection between the idealist tradition and the “intensional” conception of inference required for logic to be a truly scientific discipline (Lewis 1930).

Lewis’s propositional modal logic was to remain a specialist interest through the first half of the twentieth century, with modal issues being largely dismissed by the predominantly positivist views of the time. However, in the second half of the century, following the development of quantified *predicate* modal logic by Kripke (1959, 1964) and others, modal issues would again come to be widely discussed. In particular, a difficulty arose for the principle of extensionality when applied to the new modal logic. “Quantification theory” as it had developed in the context of *non-modal* logic, had simply conceived of quantification as ranging over domains of *actual* objects and their *sets*, but in the new modal context quantification needed to range over non-actual *possible* objects, in fact over complete “worlds” of such objects. The most dramatic defense of extensionality in the new context was that of David Lewis, who was happy to affirm an ontology of *possible* worlds as concrete, real alternatives to the actual world, from which they were spatio-temporally and causally disconnected (Lewis 1973, 1984). However, as Lewis noted, this claim was mostly met by colleagues with “incredulous stares” (Lewis 1973, 86).

In recent decades, many wanting to take modal talk seriously but unwilling to accept Lewisian modal realism have been drawn back to the type of logico-metaphysical conceptions found in Aristotle that Russell had confidently proclaimed to be dead.¹ Russell’s elimination of Hegel from the range of alternatives, however, seems to have been so complete, that Hegel’s views are rarely if ever mentioned within these debates,² and yet, I suggest, Hegel offers a largely unexamined alternative to the opposing the “possibilist”

¹ See, for example, the contributors to Tahko 2012. Particularly influential in the return to a type of Aristotelian metaphysics in this connection have been Plantinga (1978) and Fine (1994).

² For a rule-proving exception, see Borghini 2016, 46.

directions of Leibniz and Lewis and the Aristotle-inspired versions of “actualism” as found, for example, in the work of Alvin Plantinga.³ In the following sections I reconstruct Hegel’s logical treatment of tense and modality in his account of judgment in the “Subjective Logic” presented in Volume Two of his *Science of Logic* (Hegel 2010).

2. TENSED AND UNTENSED JUDGMENTS IN HEGEL’S LOGIC OF JUDGMENT

In his treatment of judgment Hegel works through a series of specifications of judgment and then inference types, progress within which is generated in a way like that found in the series of *objective categories* of the “Objective Logic” of Volume One. There, each successor in the series of categories starting with the purportedly most general, “Being”, had been presented as a solution to a problem concerning the logical coherence of its predecessor. The category “Being” had seemed the place to start because of its immediacy and generality—*everything* that “is” surely falls within its scope. However, this apparent advantage was also its shortcoming—meant as comprehensive in this way, *nothing* is left with which this concept is able to contrast, and this undermines its very *determinacy* as a concept (Hegel 2010, 59; 21.69). However, a solution to this problem is found in the further concept “Becoming”,

³ Moreover, I suggest, the influence of Hegel can be discerned even in the actual revival of modal logic in the twentieth century, and not just as part of the background to C. I. Lewis’s early attempts to treat modal notions within logic. In particular, in the mid 1950s, the New Zealand philosopher and logician Arthur Prior explored connections between modal logic and the logic of *tensed* judgments, “tense logic” (Prior 1957), in a way that was important for the subsequent development of quantified modal predicate logic (Copeland 2002). Prior had been explicit about the influence in this regard of a former teacher, John N. Findlay, and on the basis of a paper on time published by Findlay (1942), had proclaimed Findlay to be the “founding father” of tense logic (Prior 1967, 1). Findlay had himself been a philosopher with diverse interests that spanned German and Austrian phenomenology and the new logically driven developments in analytic philosophy. However, Findlay’s first and most lasting influence in philosophy had been Hegel. I explore these connections in more detail in Redding 2018.

because something's *becoming* is understood as its passage *from* nothing *to* being, "Becoming", then, can be understood as intensionally containing the concepts of "Being" and "Nothing" as its "moments", and with this third category uniting the first two, a new cycle in this process commences.

The series of cycles working through the Objective Logic concludes with the category Actuality, and at this point the Objective Logic transitions into the Subjective Logic of Volume II, in which we find Hegel's accounts of judgment and inference. Here it should be remembered that what is under examination is, as in the earlier Objective Logic, a series of *concepts* assessed in terms of their internal coherence—in this case, of concepts specifying what exactly judgments and inferences in fact *are*. And as with the conceptual triads of the objective logic, progress through the conceptions of judgment will typically contrast two initial, opposed judgment forms, the opposition between which will be resolved in a new third form that commences as the first term of the following cycle. Thus running through the series of judgments and inferences will be found two alternating judgment forms that Hegel distinguishes by the different conception of *predication* involved in each: predication as *inherence* of the predicate *in* the subject, one the one hand, and predication as *subsumption* of the subject *under* the predicate on the other (Hegel 2010, 555; 12.58). This distinction will be crucial to his conceptions of the role of both tense and modality in judgment, but for the moment let us concentrate on issues of tense.

The simple expressive structure in which an individual subject is joined to a universal predicate will provide us with a convenient starting place—Hegel calls this the initial "positive" subtype of the *judgment of existence* [*das Urteil des Dasein*] (Hegel 2010, 557–68; 12.59–70),⁴ this judgment being the first instantiation of predication as *inherence*. With an

⁴ We should not think of this as an *existentially quantified* judgment in the modern sense. That the judgment of existence picks out some specific observable entity in the world that is present to the judge is provided by the morphology of "Dasein", being thought of as some concrete thing's *being* (*sein*) *there* (*da*). Furthermore, in line with this interpretation is the fact that in the *Encyclopaedia Logic* (Hegel 1991, §172 add.) Hegel tends to use *demonstrative* phrases such as "*this* rose" in subject position for such judgment types.

individual concrete object for its *subject*, the judgment of existence instantiates a typical “*de re*” judgment, in which a single predicate is said of that subject, and as indicated above, we should expect some logical shortcoming to affect this concept of a judgment—some shortcoming that will be rectified by the succeeding form. Here Hegel will say that the positive judgment is “not true” and that it will have its “truth” in the succeeding “negative judgment”. A clue as to *why* such positive judgments are not “true”—that is, not true *judgments*—suggests itself in the array of examples that Hegel provides.

This judgment form is instantiated in such actual judgments expressed as “the rose is red”, “the rose is fragrant”, and “Cicero was a great orator in Rome”, but one example in particular provides the clue for Hegel’s *reasons* for finding all such judgments as not proper or “true” judgments. This is the example, “It is daytime now” (Hegel 2010, 562)—a version of an example familiar from his *Phenomenology of Spirit* (Hegel 1977, §95), “Now is night”. As Hegel had pointed out in the *Phenomenology*, truth should not be lost by being written down, and if written down “Now is night”, will become false if read tomorrow at midday. But the overt indexicality of “It is daytime now” also applies to judgments like “the rose is fragrant” or “the rose is red”, as it is clear that Hegel intends by such judgments ones that refer to specific, individual entities—a particular rose, for instance, that exists (*sein*) *here* (*da*), and, of course, some *particular* rose that is fragrant *now* need not still be fragrant in one or two weeks time. It is clear, I suggest, that the positive judgment of existence is meant as indexical, and thereby not a “true” judgment.

Everyday English usage is happy to ascribe truth or falsity to such contextual assertions, and such was apparently the case for Aristotle and ancient philosophical thought generally.⁵ However, in contemporary philosophy it is conventional to say that such assertions have *incomplete contents* that need completing by the addition of a temporal “index”, specifying, for example, the time at which the judgment is made. With this, the index can be taken as supplying another argument place, with respect to which the

⁵ According to Crivelli, this view “was widely held in antiquity—in fact, it remained unchallenged”. Crivelli 184.

“incomplete” original judgment now functions as a predicate,⁶ the content of the judgment thus now contains, as with Russell’s analysis, some *multiplaced* predicate (that might be rendered “is P_1 at P_2 ”.) That Hegel sides with the modern approach can be seen from the fact that he denies to such indexical statements the value of truth, “Wahrheit”, only affording them the lesser normative status of *correctness* or *accuracy* [*Richtigkeit*] (Hegel 2010, 562; 12.65).

Such an interpretation might help explain the “untruth” of the positive judgment of existence, but why should Hegel claim that a positive, S is P, judgment, as in “the rose is red” has its “truth” in the *negative* judgment, S is *not* P? Clearly, were we to think of the negative judgment as somehow *non-indexical*, and as containing a “complete” proposition, then Hegel’s claim would then coincide with the widespread assumption today that the proper *content* of a tensed sentence such as “the rose is fragrant (*now*)” can be expressed by an indexed one that preserves the truth value of assertions made over time, as in “the rose is fragrant *at time t^1* ”. But what is the connection here to *negation*? Again, I suggest, the clue is provided by a feature of the popular modern philosophical approach to judgments, in that now negation is typically treated as applying “externally” to complete propositions which, *qua* abstracta, are not *themselves* thought of as subject to temporal change. However, in order to avoid the assumption that we are here reading modern logic back into Hegel’s approach in anachronistic fashion, earlier precedents for this approach should be noted—the Stoics, for example, had regarded the contents of judgments, “*axiomata*”, in this propositional manner, and had treated negation *externally* (Bobzien 2003), and, closer to Hegel’s time, a similar approach can be found as part of Leibniz’s project of a *universal characteristic*. There is clear evidence in the *Science of Logic* and elsewhere that Hegel was familiar with these logical innovations, and indeed, the logic taught at the Tübingen Stift when Hegel was a student there was heavily influenced by such “progressive” elements of Leibniz, and not limited to traditional Aristotelian syllogisms (Pozzo 2010). This suggests that Hegel had in mind a connection between negation and a properly “propositional” conception of the content

⁶ Effectively, the “index” is taken as a proper name of a temporal point of which the incomplete sentence can be predicated. Said at time t_1 , the purported *sentence*, it is raining, is taken as predicating “it rains” as true *of* that point in time.

of judgment. Indeed, clear supporting evidence for this is found in Hegel's actual treatment of negation in these sections.

Negation is clearly central to Hegel's method in generating his series of judgment forms, just as it was in the genesis of the series of the *objective* categories, and here as well as elsewhere Hegel will talk of *two* different *stages* of negating processes—a “first” negation creating the second element of a triad, followed by a “second” negation, the so-called “negation of negation”, which results in the third stage of the cycle (that is at the same time the first stage of the next cycle). Here Hegel's two stages of negation coincides with the two broad judgment types based on different conceptions of predication involved, and aligns with the two different approaches to negation found in the logical tradition: *term* negation, as found classically in Aristotelian logic, and *sentence* negation, as found in Stoic logic as well as in the post-Fregean logic dominant today.

In this process, the first negation of an initial positive judgment of existence will produce a distinctly *limited* form of negation in which some other one-placed predicate *contrary* to the first is said of the same subject. We might then think of the judgment “the rose is yellow”, or, more generally, “the rose is *non-red*”, as the first negation of “the rose is red”. Hegel describes this negation of the original positive judgment such as only applying to the “determinateness [Bestimmtheit]” of the general predicate leaving its “determination [Bestimmung]” unnegated. What Hegel means here is that while the *particular* colour of the rose is negated, the assumption that it is nevertheless *coloured* remains: “if the rose is not red, it is nonetheless assumed that it has a color, though another color” (Hegel 2010, 565; 12.68). From a logical point of view, we might describe negation here as of narrow scope, leaving the positive judgment that the rose is (some) *non-red* (colour). In this sense, this judgment of limited-scope negation is still a *positive* judgment, saying something positive of the rose (its *non-redness*), and will in turn be subject to a further negation.

This initial form of the negative judgment manifests the type of predicative structure that W. E. Johnson, early in the twentieth century, treated as involving the division of a universal *qua* “determinable” into its “determinates”—here the determinable *colour* divides into particular colours, red, green, blue and so on (Johnson 1921, ch. 11). Johnson argued that

this determinable–determinate relation differed from that produced when a genus divided into its species. In the former, there is no specific differentiating property separating determinates of a determinable in the way that, say, the feature *rational* divides the genus “animal” into rational and arational species.⁷ Hegel here describes the logical structure of this first “*positive* expression of the negative judgment” as “the singular is a particular” (Hegel 2010, 563; 12.65), because the predicate is not simply a universal but a *particular* instance of a universal (a particular *determinate* of the determinable *colour*), that is thereby determined by its contrasts with other particular determinates of colour.

This first positive expression of the negative judgment can in turn be negated. Hegel writes: “This negation of the negative judgment appears, when one starts from its positive form, to be again a first negation. But this is not what it is”. The negation of the first (positive) negative judgment, he goes on, “negates the determinateness [*Bestimmtheit*] of the predicate of the positive judgment, its abstract universality, or, considered as content, the singular quality that it possesses of the subject” (Hegel 2010, 655; 12.69). Using Johnson’s terms, we could say that the first negation is restricted to the predicate *qua* particular determinate of its determinable, while the second negates the more general *determinable* that the first predicate instantiates.⁸

That the output of this operation is effectively the type of external negation found in Stoic propositional logic becomes apparent from the type of judgment into which the negative judgment transitions: the “infinite judgment”. This is a type of anomalous judgment that seems to presuppose some type of *category mistake*: Hegel’s examples include “the rose is not an elephant” and “the understanding is not a table” (Hegel 2010, 567; 12.70). There is a *sense* in which such judgments can be considered “true” (again, in the limited sense of accurate or correct, “*richtig*” (Hegel 2010, 567; 12.70)) but it is clear that one cannot draw

⁷ One cannot invoke some specific differentiating property possessed by “red”, say, but lacking in “blue”, for example, other than its *being* red. This is the feature we have observed in Hegel’s very first instantiation of negation between the categories Being and Nothing.

⁸ Plantinga (1978, 173–4) utilizes this de re / de dicto ambiguity of negated sentences in a similar way.

the parallel inferences from such “truths” as one can from the earlier “positive” negative judgments. That the rose is not an elephant *does not* imply that it is some *other* animal. Hegel is clearly treating the infinite judgment as a degenerate form of judgment—it offers a type of truth that is “nonsensical and fatuous” (Hegel 2010, 567; 12.70), but its very possibility has been brought about by the way that the “negation of negation” has negated the determinateness of the predicate. Now a predicate is simply treated as either true or false *of* the subject *simpliciter*, that is, irrespective of the *kind* of entity the subject is. It is this that allows for the possibility here of such category mistakes.⁹

The infinite judgment signals the transition from the judgment of existence into the judgment of reflection—the first full example of a judgment in which predication is understood as subsumption of the subject *under* the predicate. While in the judgment of existence the subject term had been implicitly treated as a particular instance of some genus (some *rose*) it is now, Hegel says, determined as a “singularity as such”—that is, as what is usually discussed as a “bare particular”, it is no longer thought of as an instance of a “kind” term—a result already observed in the “infinite judgment”. And also in contrast to the earlier judgment of existence, the *predicate* is now understood as an “*essential universal*” that “constitutes *the basis* against which the subject is to be measured and determined accordingly” (Hegel 2010, 569). Thus in the judgment “The rose is red”, the predicate “red” is no longer understood as a Johnsonian *determinate* of the determinable, “colour”, but as “the basis” against which the subject is “measured and determined”—an *abstract* universal which sorts the things of the world into two groups, those of which “red” can and cannot be predicated. Moreover, the question now arises about the status of the genus concept “rose” in the subject term: given that the subject itself is conceived as something *singular*, the answer seems to be that the concept “rose” could only relate to this singular subject in the way that the *predicate* concept “red” does, that is, it must also “subsume” the subject. This

⁹ It is here that the reversal of the original subject–predicate form becomes significant. “The rose is non-red” can be interpreted as both having a *singular* subject and a particular predicate and *also* as having a *particular* subject and a singular predicate. This latter reading brings out *both* the individual shade of red instantiated by the rose (it is *this* red), and the fact that the subject of the judgment *is* a particular instance of the genus, *rose*.

elimination of “kind” terms and their treatment as the same as other predicates is a feature of post-Fregean logic.

Thus what emerges here is a conception of the logical structure of the judgment that is close to the one used by Russell in his criticism of the Aristotelian conception of judgment—the criticism that he also applied to Hegel himself. Following Frege, Russell had treated the traditional categorical judgment as a conditional, a judgment such as “All Greeks are mortal” being understood as saying of *all things*, if that thing is a Greek, then it is mortal. Hegel, in his later discussion of Leibniz’s “mathematical” approach to inference (Hegel 2010, 602–09; 12.105–111), points to this type of analysis as found in Leibniz’s universal characteristic. Leibniz had treated subject terms *as* predicates that could be truly said of some array of indeterminate things (that Hegel describes as “thirds”) of which the predicate of the judgment can *also* be said.¹⁰ In short, Hegel’s “negation of the negation” has produced a radically different conception of logical structure to that “de re” conception found in judgments of inherence. It has produced the type of “de dicto” judgment structure, the contents of which will be conceived as “complete” propositions rather than the traditional subject–predicate structure. In short, Hegel had thus already employed the form of analysis against Aristotle that Russell was later to use against him.

Hegel’s polarity of *tensed* judgments of inherence and *untensed* judgments of subsumption in fact exemplifies a general distinction as now used by modal logicians between sentences in modal and non-modal languages respectively (Blackburn et al 2004). This is because in recent times “modal” has come to cover a range of judgments beyond the traditionally conceived judgments of possibility and necessity, the underlying idea being that

¹⁰ Treating subjects as predicates of some unnamed “third” thus forms the model for the way of adding argument places to the judgment that we have seen in the case of tensed judgments. This is basically the way Leibniz conceives of the process of “analysis” in which clear but otherwise “confused” judgments are converted into clear and distinct ones. A similar analysis, playing on the “singularity” of intuitions, can also be found in Kant for whom intuitions could function as singular terms in a way similar to that in which singular terms were to be employed in Russell’s logic.

modal judgments are ones whose truth values are in some way *contextual*. That traditional judgments of possibility and necessity can be regarded as contextual is a result of the way they are approached in *possible-world semantics*, but the idea of contextual sensitivity is most easily seen in the case of the tensed judgments we are discussing. And just as tensed sentences can be translated into untensed ones with the addition of an extra argument place, the task of modal semantics has come to be understood as that of translating a sentence from a modal language into a non-modal one in a way that eliminates context-dependence. One feature of Hegel's logic must be stressed, however, that contrasts with the way such translation has come to be understood in the context of modern modal logic. Standardly, the non-modal language is treated as the *meta-language* into which the modal language is translated, although this has been resisted by some who, treating modality as *primitive*, have regarded the non-modal language as an artificial *extension* of the modal (e.g., Prior 1977, 9–10). Hegel, however, clearly resisted the tendency to treat either modal or non-modal judgment forms as more basic. Rather, a cyclical process is put in place in which a content is progressively transformed, moving from modal to non-modal forms, and then back again to some *new* modal form, with the result that the context within which the new form is to be understood is treated as of *greater scope* than that of the first. In Hegel's series, the *classically* modal judgments of necessity and possibility will thus come to be understood as contextually sensitive, like tensed sentences, but in such a way that the context is more inclusive than the spatio-temporal context of simple *tensed* positive judgments of existence.

3. FROM TENSED TO MODAL JUDGMENTS

When Hegel comes to describe the first instantiation of a major judgment form showing the “subsumptive” type of predication—the judgment of reflection—the content of such a judgment will, by virtue of its *properly propositional* nature acquired by the end of the earlier cycle, be conceived of as free of that *particular* contextual dependency that marked the starting judgment form. But Hegel insists that this new reflective judgment will itself be subject to its own type of “untruth”. Hegel had *earlier* described judgments of inherence as related to the function by which a judgment acquires *content*, and judgments of subsumption as linked to *form* (Hegel 2010, 560; 12.62), presumably the logical form allowing formal logical relations to other judgment contents. We might expect, then, that isolated from any relation to a judgment of inherence, a judgment of reflection will be in danger of *losing* its

semantic content. In fact something like this has been anticipated by the “untruth” of the “infinite judgment” from which the reflective judgment issues. The infinite judgment surely seems cognitive vacuous. Just what does one learn about *the understanding* by being told that it is *not* a table?¹¹

Hegel presents the logical structure of the *judgment of reflection* as underlying that of particularly and universally quantified judgments, but the limitations of determinacy of the such judgments require the judgment of reflection to transition into a type of higher-order *de re* judgment of inherence, as in Aristotelian categorical judgments about “secondary substances” or “essences”. This forms the first subtype of the following “judgment of necessity” (Hegel 2010, 575; 12.77), but with this, the earlier problem of the *indeterminacy* of isolated *de re* judgments will return. This progression through the series of judgments, which proceeds by a cyclical alternation of *de re* and *de dicto* forms, will only stop with of the next major type of judgment, the “judgment of the concept” (Hegel 2010, 581–7; 12.84–9), which is a type of explicitly *evaluative* version of the earlier categorical judgment. Here it will be shown that the “truth” of that judgment is not *another* judgment but, in fact, *the syllogism*. This thesis that judgments only find *their* proper semantics as parts of larger inferences is now familiar in the work of philosophers of language, especially that of Robert Brandom (1994) who uses his own “inferentialist semantics” to interpret Hegel approach to judgment (2017). While broadly in agreement with Brandom’s inferentialist reading of Hegel, I want to explore the significance of the alternation of *de re* and *de dicto* forms in Hegel’s progression, which, I suggest, is critical for Hegel’s handling of modality.

Qua series of judgment forms in which *object-involving, de re*, judgments of inherence keep recurring, the logical process has come to involve *actual* objects of increasing

¹¹ A similar idea can be seen in some contemporary approaches to semantics in which the cognitive content of an assertion is understood in terms of the possibilities that are thereby eliminated by that assertion. On this analysis, the assertion “the rose is *red*” allows the hearer to eliminate a range of possibilities concerning the rose, that it is yellow, blue, pink, and so on. But as we have seen, this analysis begs a Johnsonian “inherence” account of predication.

logical complexity. First were particular potentially perceivable objects (“this rose” or “Cicero”),¹² but the cycle driven by negation has produced judgments “about” higher-order objects, first, in the form of the “secondary substances” of the categorical judgments of necessity (the rose *as such*, deemed to be a plant), and later, in the case of the judgment of the concept, singular “objects” of *evaluative* judgments—particular human *actions* or particular *products* of human making (Hegel 2010, 583–4; 12.85–6). Moreover, in virtue of their “subject-locating” forms, this series of recurring *de re* judgments have encoded a place for *actual judging subjects* within the contents themselves, and the place of these subjects becomes explicit in the transition to the syllogism, as there normatively accessible human activities (acting, building, and so on) become the “objects” that are judged in a way that *acts of judging itself* come to be grasped as judgable. In short, with the syllogisms that are shown to be *concrete*, thought is now construed as necessarily instantiated in the activities of embodied, related cognizers—normatively assessable agents who are the bearers of “thought”. These are the activities that Brandom, following Sellars, describes as language games of the “giving and asking for of reasons” (Brandom 1994; Sellars 1997)—those normative social practices in which judgments are expressed that make the process of judging itself a *self-correcting* one. Here, however, I want to remain focused on the relevance of the alternating predicational forms within this cyclical process, as it ties into Hegel’s distinctive approach to the nature of human consciousness and self-consciousness.

For Hegel, proper consciousness of an *object* requires *self-consciousness*, and we might appreciate this point in relation to time. Were one’s judgments *always* simply “in the moment”, one would be oblivious to the kinds of problems concerning the *lack* of stable truth-values for *tensed* judgments. Thus, in order to be a proper judge, one needs to be able to reflect on and assess the content of one’s judgments made *then* from the new perspective of *now*. It is only with this that one might then grasp the “untruth” of the judgment form exhibited by “Now is night” when uttered the next day, for example. In short, a judge must be

¹² Frege had criticised Russell’s early conception of the proposition, qua content of judgment, in that such propositions seemed to contain actual objects, such as Mont Blanc. In this sense, at this level Hegel’s thought of judgment content is similar to Russell’s: content can be *concrete*, and hence *object-containing*.

able to grasp her- or himself as the *same judge* existing *now* as had existed *then*, and this presupposes a certain ability to “step beyond” the immediate context of one’s present experience, because one will need to grasp that “now” will in turn become “then”.

Hegel’s solution to this problem involves the necessarily *social* nature of self-conscious beings. For a subject to be adequately aware of an object she or he has to be aware of *other* subjects for whom that object can be an object. That is, a judge must *recognize* other judges, and this means being aware of them as worldly beings that, like other objects, are located in time and space, but who are not thereby *merely* natural objects. And each judge must come to reflexively understand that they must be recognized by other judges in the same dual way. This is a theme that Hegel develops under the broad heading of the socially “recognitive” conditions for any individual self-consciousness (Redding 1996), and it is an idea presupposed by his conception of judging as part of a social practice that unfolds in time. Against this background, the syllogisms of the *Science of Logic* can be read as attempts to map the broad logical forms of such practices in which individual self-conscious beings are linked to each other and to aspects of the world of which they are conscious.

Against the background of this broader approach to the “pragmatic” conditions of self-consciousness we might now make some sense of the cycling of *de re* “modal” and *de dicto* “non-modal” forms in Hegel’s succession of judgments. I suggest that while *de re* judgments provide the appropriate contents for immediate judgments that are made from some located “first-person” position, *de dicto* ones provide appropriate contents of the sort that one *ascribes* to differently located *other subjects*. Time and place provide the first contexts within which this oscillation of judgment forms is appropriate, and the familiar “tensed” and “untensed” analyses found there represent the need for a judge to be self-conscious about the temporal contextuality of her or his own judging in order to compensate for it.¹³ Thus in order to properly cognize the objects of her world, Alice needs to understand to understand indexical facts about them from the *other* “points of view”. Thus she must be able to know the contents of Jim’s judgments, and grasp them as expressing how the world

¹³ This point is made by Sebastian Rödl (2012). Rödl’s position, however, is closer to Kant than Hegel.

appears from times and places that *she* does not actually occupy. Following a suggestion by his Hegelian teacher John Findlay, Arthur Prior developed a “tense logic” as a type of *modal logic* concerning how this type of coordination takes place within natural languages. But with Hegel’s judgment of *necessity*, more classically *aletheic* modal notions are now required. And while they are to be treated in a way that is broadly similar to that of the lower level, in Hegel’s account, the new judgment form will operate with a conception of “context” which is now of greater scope. This is apparent when Hegel moves to the classical *categorical* judgment as a judgment essentially about the *genus* that had been only implicit in the earlier and simpler form of *de re* judgment of inherence, the judgment of existence.

The classical categorical judgment is the first judgment of “necessity”. Understood in this form, “the rose” as subject term will *no longer* be taken as referring to some particular instance of the genus *rose* but to the genus itself: *the rose as such*. With such a judgment, as in, “the rose is a plant” (Hegel 2010, 576; 12.78), the *necessity* of those concepts belonging to the subject’s genus will be now contrasted with the *contingency* of ones attributed to it in the predicate of the simpler judgment of existence about some particular rose. The rose is *essentially* a plant, but *this* rose (while *qua* rose is essentially a plant) is only *contingently* red.

It is *negation* that drives Hegel’s series of judgment forms forward, and if we consider how negation works at the level of the categorial judgment, it will be seen that the negating form invokes an idea of a “context” to which truth is sensitive that is wider than that found in the case of *tensed* judgments. A denial that some particular rose is fragrant can be understood as coming from some other spatio-temporal location *in* the actual world, let’s say from a point of view of an observer of the rose two weeks later. But the denial that a rose is *a plant* can’t be understood in this way. Here it is tempting to say that rather than coming from some different location *in the world*, it comes from a “different world”—one in which roses *are not plants*.¹⁴ A little less dramatically, it might be said that the claim comes from the perspective of an interlocutor *for whom* the world is radically different to the way it is for the person who

¹⁴ One might imagine roses as colonies of unicellular organisms, after the model of slime-moulds, for example.

hears that claim—the perspective of a person with different theoretical beliefs about the world. In short, to entertaining the negation of the claim “the rose is a plant” will involve entertaining ideas about the world being *systematically* different to the way that it is, or is thought to be.

In the case of tensed judgments, grasping other judges as “differently located” simply meant differently located *within* the same spatio-temporal framework. That was why some shared temporal reference framework could resolve those problems of indexicality. With the judgment of necessity, however, rather than as contextualized within some particular spatio-temporal location *within* the world, the judgment is conceived *as if* “the world” itself is to be considered “indexically”, qua *the actual world* as belonging to some broader totality that includes other “possible worlds” (Lewis 1973, 86). Of course this is not to say that Hegel is committed to some ontology of possible worlds, but only that he envisages the communicative process as able to bring together interlocutors who can bring to the dialogue systematically different sets of beliefs. It is this feature of the relativity of claims to background beliefs that would allow the sentence modifier “necessarily” to be treated in Leibnizian fashion by Kripke (1959), as true in *all* possible worlds, and “possibly” as true in *some* possible worlds.¹⁵ Obviously, possible-world semantics was not available to Hegel, but the treatment of modality in terms of the framework of possible worlds was, as it had been a part of Leibniz’s treatment of modality.¹⁶ Moreover, it is relatively easy to see how something like possible-world semantics naturally follows the type of *de dicto* conception of judgment that Leibniz introduced with his idea of a universal characteristic.

The distinctly “modern” philosophical sense of the primacy of “*de dicto*” over “*de re*” judgments embraced by the Stoics had reappeared in the nominalist tradition and was again taken up by Leibniz, and this opened up the possibility for some explicitly *propositional*

¹⁵ In modern modal logic these worlds are limited to those “accessible” from a given world, a feature not found in Leibniz.

¹⁶ Brandon Look points out that “while Leibniz does not *explicitly* define necessity and contingency in terms of possible worlds ... his conception of possible worlds underlies his account” (Look 2016, 196).

approach to alethic modal logic. Among the axioms of such a logic, will be one linking the three modalities in the following way: If a proposition is necessarily true, then it must be (actually) true, but, of course, a proposition's being actually true does not imply its being necessarily true. Similarly, if some proposition is judged to be (actually) true, then it must be possibly true, but (and as Hegel notes (1991, §143 Zusatz) a proposition's being possibly true does not imply its being (actually) true. These modal axioms thus portray the scope of possible truths—truths about “possibilities”—as *wider* than the scope of *actual* truths, which in turn is wider than the scope of necessary truths. From this it is a short step to explaining the greater scope of possibility over actually with the idea of “possible worlds” of which the actual is one, an idea that had been given various religious forms of expression in the medieval period.

I have suggested that the reflective point of view compensating for the contextual specificity of the positive judgment of existence be thought of as representing a view onto the subject matter of the judgment from a differently located other within a shared world. At this higher level of judgment, however, one must be able to entertain hypotheses about how the world might be that differ systematically from one's beliefs about how the world is. We might think of the earlier form of reflexive decontextualization as bound up with the subject's self-conscious capacity to move (in time) through space, but with the categorical judgment a new type of “movement” of the subject is necessarily, the self-conscious capacity to move (in time) within *logical* space or, using a related metaphor, to move within the Sellarsian “space of reasons”. That is, it presupposes the capacity to *reason inferentially*.

Again, this link is made explicitly by Hegel. With the categorical judgment, as with the earlier *de re* judgment, limitations of its form will lead to a more elaborate version of the *de dicto* form earlier seen in the judgment of reflection. Within the overarching framework of the judgment of necessity this is the “hypothetical judgment”—what effectively is now treated as a conditional—that is the successor to the categorical judgment (Hegel 2010, 576–8; 12.79–80). In the hypothetical judgment the original relation *between* subject and predicate now gets expressed as a logical relation between antecedent and consequent, considered as separate, logically connected contents—contents “determined in terms of the relations of reflection as a relation of *ground* and *consequence*, *condition* and *conditioned*, causality etc.” (Hegel 2010, 577; 12.79). With this, the *de dicto* structure of the earlier *reflective* judgment

returns, but at a higher level, the hypothetical judgment instantiating a logical relation between *two* such judgments.

4. TIME AND MODALITY IN THE LIMITATIONS OF ARISTOTLE'S METAPHYSICS

It is clear from his discussion of modality in the section “Actuality” with which the Objective Logic concludes that Hegel is aware of that style of thought, that, based on the primacy of the *de dicto* conception of judgment as seen in Leibniz's universal characteristic, gives rise to “possibility” being conceived as of wider scope to “actuality”: “The notion of possibility appears initially to be the richer and more comprehensive determination, and actuality, in contrast, as the poorer and more restricted one” (Hegel 1991, § 143 *Zusatz*). However, he continues, “actuality is what is more comprehensive, because, being the concrete thought, it contains possibility within itself as an abstract moment”. This, we might describe, as Hegel's critique of the “one-sided” reduction of judgment structure to the *de-dicto* model. At the same time, however, as we have seen, he does not affirm as fundamental or ultimate any *de re* conception of judgment structure, with its one-placed predication, or the corresponding *de re* conception of modality. Rather, the cyclical alternation of *de re* and *de dicto* conceptions of judgment allows for a similar alternation of *de re* and *de dicto* conceptions of *modality*. With these features in place, it might now be useful to contrast Hegel and Aristotle in terms of their respective approaches to time and modality.

It is sometimes said (e.g., Hartmann 2013, 7) that in his emphasis on “real” as opposed to logical or “formal” modality, Hegel returns to Aristotle's ontological or *objective* approach to possibility or “potential” (*dunamis*) the material from which individual substances are actualized (the process of *energeia*), but what we have said about the role of logical conceptions of modality in Hegel's cycles of decontextualization casts doubts upon the accuracy of this view. As found in one of his own examples, Aristotle conceives such potentiality as akin to a capacity, such as a person's capacity to build, which a person may be said to possess when *not* actualizing it (Aristotle, *Metaphysics* 1046b29-33).

This *dunamis–energeia* pair is closely bound up with the form–matter distinction of Aristotle's metaphysics: wood and stone are potentially a house, the *form* of the house

becoming actualized in the process of its building. Were Hegel to closely align his position on possibility with this general picture, this would surely confirm Russell's original diagnosis of his commitment to a basically *Aristotelian* metaphysics grounded in a term logic. However, while there is certainly a sense in which Aristotle's this-worldly metaphysics plays an important role as a model for Hegel, too much emphasis on this relation is in danger of ignoring Hegel's conceptions of the limitations of this classical picture as well as his clear intention to incorporate the modern "subjective" standpoint into it—a standpoint that relies on the more formalizable considerations of logic seen in the conception of judgments with *de dicto* content. I have argued for the importance played by mediating *de dicto* logical relations in Hegel's treatment of modality in the Subjective Logic along with its relation to issues of temporality, but we also see this anticipated in his treatment of the category of Actuality, with which the Objective Logic terminates. Thus while broadly in line with the Aristotle's "actualist" approach, and aiming to integrate "possibility" into the fabric of the actual, Hegel's way forward here does not look at all Aristotelian.

Hegel starts with the modern logically based notion of "formal" possibility and its shortcomings: the formal approach conceives of the realm of the possible as an "indeterminate receptacle of everything in general"—a receptacle of possibilities that simply contains "everything ... that does not contradict itself" (Hegel 2010, 479; 11.382)—a expression of the plurality of possible worlds approach. But internal problems with this conception lead to the notion of *real* possibility, and yet in contrast to Aristotle's conception of an individual thing's actualizable potential or capacity, Hegel's account of real possibility starts from the idea of the multiple *conditions* of some entity's or state of affair's existence—conditions that would be to be grasped *via* the complex hypothetical judgment as discussed in relation to the categorical judgment in the Subjective Logic: "The real possibility of a matter (Die realer Möglichkeit einer Sache) is .. the immediately concretely existing multiplicity of circumstances, which are related to it" (Hegel 2010, 482: 11.386 translation modified), "the totality of conditions, a dispersed actuality which is not reflected into itself, but is determined to be the in-itself of an other and intended in this determination to return to itself" (Hegel 2010, 483. 11.387). All this, of course, depends on the logical capacity for hypothetical reasoning, a dependence made explicit in the transition to the syllogism.

Thus in conceiving of *real* possibility we approach the possibility of something not yet actual as at first the “dispersed actuality which is not [yet] reflected into it”—the set of conditions that is necessary for the new thing or state of affairs to come into existence. The starting point here is more the modern conception of causality understood as the set of necessary and sufficient conditions for something’s occurrence, than anything found in Aristotle, but Hegel goes on to point out that in order to grasp these conditions modally *as* constituting the possibility *of* something actual, they must be understood *in relation to* the actuality that results. That is, the starting idea that the real possibility of some A *just is* the totality of its necessary conditions omits the thought that this totality *itself* is entirely indeterminate *if* conceived of independently of the A to which it gives rise.¹⁷ The conditions need to be conceptually *gathered*, as it were, into the subject place of a judgment that they can be conceived as “the possibility of A”, and such activity for Hegel, as for Kant but not for Aristotle, presupposes the activity of some unified *subject* doing such “gathering”.¹⁸ But unlike the picture found in Kant’s universal “I think”, such unified subjects in Hegel are plural and understood as not only already spatio-temporally *located* in the actual world but, self-consciously cognitively “located” in relation to some *possible* conception of that world—the world as that subject conceives it.

Within the resources of Aristotle’s term logic it is difficult to see how the idea of the “external conditions” for the actualization of a potential might play any real role within his metaphysics, and yet such conditions were widely discussed in ancient philosophy, and examples used by Aristotle himself show him as clearly aware of the need to take appropriate

¹⁷ Similarly for Aristotle, the matter of a substance cannot be independently conceived as that which has the power to become the substance *qua* formed matter, as the matter is identified in terms of what it is that becomes substance and cannot be identified independently of this.

¹⁸ In this sense, possibilities are mind-dependent, making Hegel is a “possibility-idealist” as described and defended by Nicholas Rescher (1979). As he is committed to the existence of possibilities in the actual world, Hegel must thereby be committed to the existence of *mind* in the actual world, but this is an ontologically trivial thesis if one takes “actual” to function as an indexical—the actual world being the possibility that *we* are *in*.

conditions into account. A sperm, for example, might be considered to be a potential man, but it is only so when it can “further undergo a change in a foreign medium”—presumably, undergoing changes that depend on its being implanted in a uterus—that it is *genuinely* a potential man (Metaphysics, 1049a 14–18). But from the point of view of both his metaphysics and his logic it is unclear how to account for such conditions. Of the four *aitia*, it might be thought that “*to kinoún*”, the so-called “efficient cause”, might here be invoked, but Aristotle’s concept here is not the modern one. The being-in-a-womb is not an “efficient cause” of the sperm’s becoming a man, because Aristotle regards the relevant *kinoún* here is the *actual man* from whom the sperm issued.

In contrast, it would seem that the Stoics, who had a more propositional form of logic with which to work, were better equipped to conceive of the role of conditions here. For example, unlike the picture presented in Aristotle’s sperm example, the Stoics considered that although external conditions might prevent something from happening, that event could still be considered *as* a possibility. Wood at the bottom of the ocean still had the potential to burn, even if in fact it were to remain there forever, and never actually burn (Bobzien 1999, 110).

As seen in the issue of the modal status of the sperm, Aristotle often seems to collapse modal issues *into* temporal ones. Thus we might think of the problem of the sperm as an example of problems besetting a more general principle found in Aristotle—the so-called “Principle of Plenitude” (Hintikka 1973, ch 5)—which says that any potential A, given enough time, will *become* A. Another expression of this principle is that what said of *the past* must thereby be *necessarily* true, possibility being restricted to the as yet unrealized *future* states of the world. Such notions, however, seems to go against everyday modal intuitions, which support counterfactual conditionals. Perhaps more importantly, they would rule out the conception of possibility that is required for the modern notion of subjective freedom, with its accompanying sense of a person’s *having being able to act* in ways contrary to the way in which they *actually* acted.

Hegel was critical of the limitations of Aristotle’s metaphysics, especially in relation to modern notions of subjectivity and freedom, and aimed at integrating the modern principle of subjectivity into a metaphysical view of the world that, nevertheless like Aristotle’s, offered a “this-worldly” alternative to Platonism. This, I suggest, is on display in his

treatment of temporal and modal considerations in relation to judgment. But Hegel's way forward was not to simply replace Aristotle's limited logic with the new more powerful version—to translate broadly “modal” judgments into their non-modal equivalents. Thus, he perceived the need for the two types of logic—modal and non-modal—to be somehow integrated, and the pursuit of this took him into areas of logic and metaphysics that have once again become central to philosophy.

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