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mento istituzionale e quello culturale. L'identità culturale nazionale, come quella regionale o locale, è un valore primario. E che movimenti sovranisti, o anche indipendentisti e separatisti, ne abbiano fatto una bandiera per la loro battaglia è anche conseguenza della colpevole trascuratezza di cui è stata oggetto per tanti decenni. Ma occorre nettamente distinguere tra l'importanza di dispositivi politici e amministrativi che tutelino ogni specificità culturale (artistica, linguistica, religiosa, folkloristica, enogastronomica), anche in difesa dell'identità dei gruppi, e la necessità di istituzioni politiche culturalmente neutre. La promozione delle culture è differenziante, la funzione della politica è unificante. Compito della politica è elaborare regole di convivenza per la composizione degli interessi, per cui i risultati della politica saranno tanto più consistenti quanto più ampio sarà il perimetro della convivenza possibile. In un mondo globalizzato non abbiamo più bisogno di tante piccole nazioni solo nominalmente libere di difendere i loro interessi e le loro culture. Occorrono grandi organizzazioni politiche, come l'UE, che conciliando gli interessi di più nazioni limitino i pericoli dell'anarchia internazionale e degli egoismi globalizzati. Non abbiamo bisogno dell'Europa delle patrie (il romanticismo ottocentesco è lontano), ma di un'Unione Europea forte, nella prospettiva degli Stati Uniti d'Europa. Un unico Stato istituzionale, con tante nazioni, tante culture, tante lingue e tanti modi di vivere.

Massimo Mori

Andrea Iacona, *Logical Form: Between Logic and Natural Language*, Dordrecht, Springer, 2018, pp. 134.

Two notions of logical form

Ascribing logical forms to natural language sentences serves two purposes. On the one hand, it plays a role in accounting for their logical properties and relations, what Iacona calls the *logical role* of logical form. On the other hand, it plays a role in the formulation of a compositional theory of their meanings, what Iacona calls the *semantic role* of logical form. The central thesis of Iacona's book is that there is no single notion of logical form that can adequately fulfill both roles: to fulfill the semantic role one needs a syntactic notion of logical form, by which the logical form of a sentence is determined by its syntactic structure, to fulfill the logical role one needs a truth-conditional notion of logical form, by which the logical form of a sentence is determined by the proposition it expresses.

In my view, Iacona makes a very plausible case for his thesis, whose consequences are explored in detail with rigor and clarity.

Researchers that count logical forms as tools of their trade will find this a useful reading. In virtue of its clarity and systematicity, the book is also suitable for a graduate-level course on the topic of logical form. The following remarks, although they are critical in nature, should not detract from the value of the book.

Iacona's rejection of intrinsicism

In Chapter 3, Iacona argues that the intrinsicist notion of logical form is unable to account for some instances of logical properties and relations. According to the most natural formulation of the intrinsicist view,

- (1) logical form is determined by a level of *syntactic representation*, for example, in Montagovian terms the relevant level is the syntactic derivation and in Chomskyan terms the LF representation.

Iacona provides a battery of four arguments against the intrinsicist view. The first argument (case 5 on p. 48) may be stated as follows (my formulation is slightly different from Iacona's, but I trust that it makes the same point):

Premise one: Arguments (2)-(3) are valid:

- (2)
 - a. It is not the case that this is identical to this (where the first occurrence of "this" is uttered while pointing at Plato, the second occurrence while pointing at Aristotle).
 - b. Thus, there are at least two things.
- (3)
 - a. This is identical to this (where both occurrences of "this" are uttered while pointing at Plato).
 - b. Thus, there is something identical to itself.

Premise two: If arguments (2)-(3) are valid, then the validity of (2) is explained on a par with the validity of (4) and the validity of (3) is explained on a par with the validity of (5):

- (4)
 - a. It is not the case that Plato is identical to Aristotle.
 - b. Thus, there are at least two things.
- (5)
 - a. Plato is identical to Plato.
 - b. Thus, there is something identical to itself.

Premise three: If the validity of (2)-(3) is explained on a par with the validity of (4)-(5), then "this is identical to this" in (2-a) has logical form (6-a), and "this is identical to this" in (3-a) has logical form (6-b):

- (6) a. $a = b$
 b. $a = a$

Premise four: If “this is identical to this” in (2-a) has logical form (6-a), and “this is identical to this” in (3-a) has logical form (6-b), the logical form of “this is identical to this” depends on the reference of “this”.

Premise five: If the logical form of “this is identical to this” depends on the reference of “this”, the logical form of “this is identical to this” is not determined by its syntactic representation, i.e. the intrinsicalist view of logical form is false.

Conclusion: The intrinsicalist view of logical form is false.

The argument can be resisted. One line of resistance is the following. Arguments (2)-(3) are valid in the sense that, in the contexts in which the pointings are as described, the proposition expressed by (2-b) is a necessary consequence of the proposition expressed by (2-a) and the proposition expressed by (3-b) is a necessary consequence of the proposition expressed by (3-a). In this sense of validity, argument (2) is valid for the same reason that argument (4) is valid, since, in the described context, the premises of these arguments express the same proposition and the conclusion is a necessary consequence of it. The same goes for (3) and (5). So, the intrinsicalist may accept both Premise one and Premise two of Iacona’s argument. But once the validity of (2)-(3) and (4)-(5) in the context described is understood in the way suggested above, Premise three may be challenged. We may show this by adopting Predelli’s (*Bare-boned demonstratives*, «The Journal of Philosophical Logic», XLI, 2012, pp. 547-62; *Meaning without Truth*, Oxford, Oxford University Press, 2013) bare-boned account of demonstratives, which Iacona himself mentions. Predelli’s proposal may be spelled out in the following way. Let’s define the first occurrence of “this” in the syntactic representation of a discourse σ as the occurrence of “this” such that there is no other occurrence of “this” linearly preceding it in σ . The second occurrence of “this” in σ is then defined as the occurrence of “this” immediately preceded linearly by the first occurrence of “this” in σ . And so on for other occurrences. Assume that in σ the first occurrence of “this” bears index 1, the second occurrence index 2, and so on. Finally, let’s assume that a context of utterance c specifies an assignment function g_c which assigns an individual to each occurrence of a demonstrative. The semantic rule for demonstratives may now be stated in (7):

- (7) ‘this_{*i*}’ in a context c denotes $g_c(\text{this}_i)$.

Notice that the purpose of the indices here is only to keep track of different occurrences of the same lexical item “this”. Indeed, since each occurrence bears a different index, indexing is not used to express coreference or non-coreference. According to this proposal, the logical form of “this is identical to this” in both (2-a) and (3-a) is (8) below and is determined by the syntax (consistently with the intrinsicist view):

$$(8) \quad \text{this}_1 = \text{this}_2$$

Yet, assuming that the assignments in the contexts of utterance of (2-a) and (3-a) reflect the referential intentions manifested by the speaker through the pointing, (8) in (2-a) expresses the proposition that Plato is identical to Aristotle and (8) in (3-a) expresses the proposition that Plato is identical to Plato. As I pointed out, this is sufficient to account for why the validity of (2)-(3) and the validity of (4)-(5) are felt to be on a par. So, contrary to Premise three, the validity of (2)-(3) may be explained on a par with the validity of (4)-(5), although the logical form of “this is identical to this” in both (2-a) and (3-a) is the same and is syntactically determined.

The other arguments mustered by Iacona against intrinsicism may be countered in a similar way. Iacona’s second argument (case 6 on p. 48) is based on the observation that argument (9) is invalid and its invalidity should be explained on a par with the invalidity of (10):

- (9) a. This is a philosopher (uttered while pointing at Plato).
 b. Thus, this is a philosopher (uttered while pointing at Aristotle).
- (9) a. Plato is a philosopher.
 b. Thus, Aristotle is a philosopher.

On the other hand, the validity of (11) should be explained on a par with the validity of (12):

- (11) a. This is a philosopher (uttered while pointing at Plato).
 b. Thus, this is a philosopher (uttered while pointing at Plato).
- (12) a. Plato is a philosopher.
 b. Thus, Plato is a philosopher.

If this is correct, according to Iacona, (9) has logical form (13) and (11) has logical form (14):

- (13) a. P(a)
 b. Thus, P(b)
- (14) a. P(a)
 b. Thus, P(a)

This means that the logical form of “This is a philosopher” depends on the reference of “this”, thus logical form is not determined by syntactic structure. Again, the intrinsicalist may reject the view that (9)-(11) have logical forms (13)-(14) and still provide a parallel account of the validity of (9)-(10) and of the validity of (11)-(12). According to the indexing convention assumed above for demonstratives, both (9) and (11) have the same syntactically determined logical form in (15):

- (15) a. This₁ is a philosopher
 b. Thus, this₂ is a philosopher

Assuming that the assignment in the context of utterance of (9) reflects the referential intentions manifested by the speaker through the pointing, the premise and the conclusion of (9) in the described context express the same propositions as the premise and the conclusion of (10). Since these propositions are logical independent, both (9) and (10) are invalid. On the other hand, in the context described for (11), the premise and the conclusion of (11) express the same proposition as the premise and the conclusion of (12), thus accounting for the validity of (11) on a par with the validity of (12).

Essentially the same type of reply may be given to Iacona’s third and fourth argument (case 7 on p. 48 and case 8 on p. 49) against intrinsicalism. The third argument is based on the assumption that, in order to account for the fact that (16-a) contradicts (16-b) on a par with the fact that (17-a) contradicts (17-b), (16-a) must have the same logical form as (17-a) and (16-b) the same logical form as (17-b):

- (16) a. I’m a philosopher (uttered by Plato).
 b. You are not a philosopher (uttered by Aristotle while pointing at Plato).
- (17) a. Plato is a philosopher.
 b. Plato is not a philosopher.

But again the intrinsicalist may reject this assumption by pointing out that, under a standard Kaplanian semantics for indexicals, (16-

a) and (16-b) express the same propositions as (17-a) and (17-b) in the described context, and this may be sufficient to account for the contradictoriness of (16) on a par with the contradictoriness of (17).

The same reply may also be given to the fourth argument, which is a variant of the third and is based on the observation that (18-a) and (18-b) are consistent with each other and so are (19-a) and (19-b):

- (18) a. I'm a philosopher (uttered by Plato).
 b. I am not a philosopher (uttered by Aristotle).
- (19) a. Plato is a philosopher.
 b. Aristotle is not a philosopher.

So, I think that Iacona's arguments against intrinsicism fail to establish that intrinsicism is false. Given that Iacona seems to agree that not all cases of validity, invalidity, or contradiction need to be regarded as cases of *formal* validity, invalidity, or contradiction (namely as cases in which the validity, invalidity, or contradiction is to be accounted for by logical form), what Iacona's arguments against intrinsicism really show is that the supporter of intrinsicism and the supporter of the truth-conditional view of logical form advocated by Iacona carve up the domain differently with respect to what is to be regarded as a case of formal validity, invalidity, or contradiction and what is not.

Now, Iacona is aware of this possible reply (see discussion on pp. 51-52), but assumes that the reply would be satisfactory only in so far as it could be shown that (a) the cases that fall outside a formal explanation form a restricted class and, moreover, (b) the distinction between cases that fall outside a formal explanation and cases that don't can be drawn along the line of the distinction between context-sensitive and non-context-sensitive cases. Given the pervasiveness of context-sensitivity in natural languages, (a) seems hard to maintain, and given that some arguments involving context-sensitive expressions seem to be formally valid, (b) is also doubtful.

However, it seems to me that whether (a)-(b) are regarded as criteria by which the intrinsicist reply should be evaluated depends on how one views the task of determining which cases of validity, invalidity, or contradiction are instances of formal validity, invalidity, or contradiction. Someone who views this task as an empirical undertaking might not be swayed by finding out that an intrinsicist theory of logical form leads to the conclusion that a large part of the cases of validity, invalidity, or contradiction is not to be accounted for as an instance of *formal* validity, invalidity, or contradiction, or by the fact that the theory leads to the conclusion that the validity of arguments involving context-sensitive expressions is

sometimes, but not always, a case of formal validity. In principle, it might be empirically testable by psycholinguistic methods whether, in drawing some inferences in natural language, speakers access information regarding content or not. And it might turn out that the way the domain is carved out by empirical data in this respect is correctly predicted by an intrinsicalist view of logical form.

Before leaving the issue of intrinsicalism, let's come back to Iacona's first argument. Above, I described one way in which the intrinsicalist may reject the argument. There is also a different line of defense discussed by Iacona which the intrinsicalist might adopt. In formal semantics, a standard way of treating pronouns is to assume that indices are freely assigned to them (possibly the same index for different occurrences) and pronoun denotation is determined by a contextually provided assignment function (see I. Heim – A. Kratzer, *Semantics in generative grammar*, Oxford, Blackwell, 1998, pp. 242-45). Abstracting away from semantic differences due to the fact that English demonstratives, unlike pronouns, are not marked for gender and are marked instead by the proximal/distal opposition, a similar treatment may be extended to demonstratives. Under this treatment demonstratives are essentially free variables, whose denotation is fixed by the assignment coordinate of the context, which is meant to represent the speaker's referential intentions. Notice that this proposal differs from Predelli's, since now two different occurrences of a demonstrative may bear the same index and, if they do, they refer to the same individual. In this account, the string "This is identical to this" is multiply ambiguous syntactically, one possible structure being (20-a), another being (20-b):

- (20) a. $this_1 = this_2$
 b. $this_1 = this_1$

In a context in which the first occurrence of "this" is uttered while pointing at Plato and the second occurrence while pointing at Aristotle, a structure like (20-a) is intended (and g_c assigns Plato to "this₁" and Aristotle to "this₂"), while when both occurrences of "this" are uttered while pointing at Plato a structure like (20-b) is intended (and g_c assigns Plato to "this₁"). In this account, the validity of (2)-(3) is explained on a par with the validity of (4)-(5) in the sense that both in (2)-(3) and in (4)-(5) the conclusion follows formally from the premises by a rule of existential generalization (the invalidity of (9) may now also be accounted on a par with that of (10) as an instance of formal invalidity).

However, according to Iacona, this way of explaining why (2)-(3) are valid is not compatible with intrinsicalism. His reasons are the following:

Arguably, if one wants to provide a general treatment of context-sensitivity in terms of indexed structures based on semantic considerations, one will end up holding a radical view according to which context-sensitivity reduces to some nonstandard form of ambiguity, so that every difference of truth conditions due to context-sensitivity can be described in terms of a difference of syntactic structure. Thus, one will claim that there is a distinct lexical item for each referent of ‘this’, and so that infinitely many syntactic structures can be associated to [(2-a)]. But that view could not be invoked to defend [intrinsicism], as it implies that syntactic structure in the relevant sense is not an intrinsic property of a sentence. (p. 50)

For sure, anyone who wants to pursue this account of the validity of (2) should qualify the claim that (2) is formally valid by saying that it is so relative to a syntactic representation of (2-a) by which the two occurrences of “this” are assigned different indices (similarly, the claim that (3) is formally valid should be qualified by saying that it is so relative to a syntactic representation of (3-a) by which the two occurrences of “this” are assigned the same index). But once this qualification is made, the claim that both (2)-(3) are formally valid is consistent with intrinsicism, since the syntactic structures assumed for the premises determine a logical form from which the conclusion follows by existential generalization. Notice, moreover, that this treatment of demonstratives, contrary to what Iacona claims, does not amount to reducing context-sensitivity to ambiguity, since the same indexed item “this_{*i*}” may have different referents depending on the context (as the context determines the assignment).

Iacona may insist that, since in this account the syntactic structures selected for (2)-(3) depend on the fact that they determine logical forms that match the interpretations intended by the speaker, ultimately logical form is determined by truth-conditions and not by syntactic structure. But notice that, if this is how the intrinsicist view in (1) is understood, there is no need to appeal to indexicals to refute intrinsicism, ordinary scope ambiguities should do the job as well. Consider sentence (21):

(21) Every guest was sitting close to a napkin.

It is standardly assumed in Chomskyan linguistics that (21) has different LF representations, one that corresponds to a reading in which the same napkin was close to every guest and one that corresponds to a reading in which the napkin may be different for different guests. Yet, only the latter reading is selected in ordinary contexts. By Iacona’s reasoning, we should conclude that the logical form of (21) is not determined by syntactic structure in the relevant sense, and thus intrinsicism is false, since which LF is

selected for (21) depends on how we understand (21) in ordinary contexts. A similar point may be made concerning (22):

(22) John saw the man with binoculars.

Sentence (22) is syntactically ambiguous between a structure in which “with binoculars” modifies the noun “man” and a structure in which “with binoculars” modifies the whole Verb Phrase “saw the man”. The former structure corresponds to the interpretation by which John saw a man who was holding binoculars, the latter structure to the interpretation by which John was using binoculars when he saw the man. In context, one reading may be selected. Again, by Iacona’s reasoning we should conclude that the logical form of (22) is not determined by syntactic structure in the relevant sense, thus intrinsicism is false. Of course, Iacona may accept these conclusions and regard (21)-(22) as providing further arguments against intrinsicism, but, if this is the relevant sense of “determined” in (1), I am not sure that any of the leading intrinsicists, Montague, Lewis, or Kaplan, would accept intrinsicism.

Iacona’s rejection of the Uniqueness Thesis

Iacona argues against the Uniqueness Thesis (UT) according to which there is a single notion of logical form that fulfills both the logical role, namely that of explaining the logical properties and relations that natural language sentences appear to exhibit when used in context, and the semantic role, namely that of playing a part in a compositional theory of meaning of natural language sentences. As I mentioned above, Iacona claims that the logical role and the semantic role are fulfilled by different notions of logical form: the truth-conditional notion suits the logical role and the syntactic notion suits the semantic role.

A consequence of Iacona’s view, as I understand it, is that fulfilling the semantic role and fulfilling the logical role are independent tasks. However, we do not have direct access to what the logical properties of natural language sentences are and compositionality considerations often play a role in evaluating hypotheses concerning these properties. The debate on natural language conditionals may help to illustrate the point. It is a controversial issue how indicative conditionals, like (23), should be analyzed:

(23) If the butler didn’t do it, the gardener did.

Some authors, like D.K. Lewis (*Probabilities of conditionals and conditional probabilities*, «Philosophical Review», LXXXV, 1976, pp. 297-315. Reprinted in Id., *Postscript to «Probabilities of conditionals and conditional probabilities»*, in *Philosophical papers*, New York,

Oxford University Press, 1986, vol. II, pp. 152-56) and F. Jackson (*Conditionals*, Oxford, Blackwell, 1987), claim that they are material implications, namely that they have the logical form in (24), while other authors, like R.C. Stalnaker (*A theory of conditionals*, in *Studies in Logical Theory*, ed. by N. Rescher, Oxford, Blackwell, 1968, pp. 98-112; *Indicative conditionals*, «Philosophia», V, 1975, pp. 269-86), claim that they have the logical form in (25), where $>$ is an intensional operator:

$$(24) \phi \supset \psi$$

$$(25) \phi > \psi.$$

These claims predict different logical properties for natural language conditionals. Now, the following argument for the existence of God is regarded as a problem for the material conditional analysis of indicatives (D. Edgington, *Do conditionals have truth conditions?*, «Crítica: Revista Hispanoamericana de Filosofía», XVIII, 1986, pp. 3-39, attributes it to W.D. Hart):

- (26)
- a. If God does not exist, then it is not the case that if I pray my prayers will be answered (by Him).
 - b. I do not pray.
 - c. So God exists.

Indeed, if the argument had the logical form in (27), it should be valid, but it's not:

- (27)
- a. $\sim p \supset \sim (q \supset r)$
 - b. $\sim q$
 - c. $\therefore p$

Yet, notice that (26) is no problem at all for the material analysis of indicatives if we assume that the first premise of (26), namely (26-a), has logical form (28-a) instead of logical form (27-a):

- (28)
- a. $\sim p \supset (q \supset \sim r)$
 - b. $\sim q$
 - c. $\therefore p$

Indeed, (28) is no longer a valid argument. The argument in (26) is regarded as a problem for the material conditional analysis precisely because, although the alternative logical form in (28-a) might provide an intuitively plausible reading of (26-a), there is no principled reason to assume that a compositional derivation of the me-

aning of the premise involves applying the negation only to the consequent when, syntactically, it applies to the whole conditional. So, compositional considerations here raise a problem for the view that the logical properties of indicative conditionals should be accounted for by the logical form in (24).

Iacona may avoid this conclusion by assuming that, for the supporter of the material analysis, logical form (27-a) should be independently required by rules on adequate formalization (some such rules governing adequate formalizations of names are stated for example in section 6.2 of Iacona's book). But the point is that any rule requiring that (26-a) be formalized as (27-a) rather than as (28-a) would be driven by the fact that in the *syntactic structure* of the first premise negation applies to the whole conditional "if I pray my prayers will be answered", so a rule of this kind would be essentially motivated by compositional considerations. Another possible reply for Iacona, one which is more consistent with the spirit of his proposal, is that, indeed, the supporter of the material analysis should deny that (26) raises a problem for the analysis, since the objection only stands if compositional considerations are relevant to how the logical form responsible for the logical properties of indicative conditionals should be selected. If this reply is taken, notice that it implies a revisionary stand concerning what type of evidence is relevant to evaluate accounts of the logical properties of natural language connectives¹.

Sandro Zucchi

¹ I thank Martina Rosola for feedback on a previous version of the review.

