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SCORING THE INTERPRETATION GAME

Since the publication of *Word and Object*,[1] the interpretation game has become a preoccupation for philosophers interested in language and intentionality. The game has many variations, and interest in them by philosophers is due to the belief that a number of important philosophical theses hinge on how one scores the interpretation game. Semantic Realists believe that players in the interpretation game who employ an optimal strategy in optimal circumstances can Win. They also believe that different players who employ optimal strategies in the same optimal circumstances will Agree and share the Win. Semantic Skeptics doubt that there are sufficiently optimal strategies and circumstances for players in the interpretation game to assign a score and to determine whether the players have Won, Lost, or Tied.[2] Finally, Semantic Irrealists believe that there is no unique way to achieve a Win, and different players adopting optimal strategies in optimal circumstances who at the end of play Disagree, may nevertheless Tie.[3] This paper describes a variant of the interpretation game and it highlights some features of it which are salient to keeping score. The variant aims to provide a level playing field for Realists, Skeptics, and Irrealists. The features of it which are salient to keeping score aim to be neutral between them. The conclusions which it draws from the game it describes provide some consolation for the Realists, some disconsolation for the Irrealists, and are apt to leave the Skeptics unmoved.

Our variant of the interpretation game has two players: Interpreter$_1$ and Interpreter$_2$. The players share uninterpreted data, but they act independently of each other, and they do not compare their results till the end of the game. Their aim is to provide an interpretation of a corpus of sentences which they have obtained from an interpretee. Let's call the interpretee Paul. The players have observed Paul's verbal and non-verbal behavior over a period of time; they have learned which of Paul's behaviors count as *assent* to a

sentence in Paul's language and which of Paul's behaviors count as *dissent* from a sentence in Paul's language. Paul is co-operative and candid. We stipulate that Paul's language submits to a canonical regimentation, or, more simply, that Paul's language is PM-ese enriched by a stock of empirical predicates. This stipulation simplifies the interpretation game, since it provides the players with a list that distinguishes between the logical terms in Paul's language, to which it assigns classical interpretations, and the extra-logical terms in Paul's language. By prompting assent and dissent responses from Paul, the players have compiled a substantial list of sentences to which Paul assents. We stipulate that this set, call it S, is complete in the sense that it contains every sentence in Paul's language which he accepts or is disposed to accept as true. It fully represents Paul's state of belief, and each player has a copy of this list of sentences which Paul holds to be true. Call the set of extra-logical terms which feature in S, T, and T's members $T_1, ..., T_n$. Now, an interpretation I of S is defined as a function which assigns each T_i in T an extension in a domain of objects D. It is a logical fact that there are many domains of objects within which a set of sentences is satisfied if it is satisfied in any.[4] Correlatively, there are divergent ways of assigning extensions to the T_i in T within a given domain of objects; all that is required is isomorphism of the divergent extensions.[5] We now come to the aim of the interpretation game. There are too many interpretations, in the sense just defined, and most of them are too implausible, to account for what Paul means by the members of S. Our players aim to find a set of constraints, call it C, which delimits a set of *acceptable* interpretations, to the exclusion of the rest.

Semantic Realists believe that there is a unique interpretation of S which is acceptable, and that the set of constraints C should be strong enough to identify it. They count a player as having a Win in the interpretation game when the player finds the right set of constraints that identify exactly one interpretation as acceptable. This will be the interpretation of the T_i in T which represent what Paul means by the members of S. For Semantic Realists, players who adopt com-

1. Quine, W.V.: *Word and Object*. Cambridge, Mass. 1960.
2. Kripke writes of such a skeptic, and assigns him the role of Wittgenstein's dialectical partner. Cf. Kripke, S..A.: "Wittgenstein on Rules and Private Language", in: Block, I. (ed.): *Perspectives on the Philosophy of Wittgenstein*, Oxford 1981, pp.264–265.
3. E.g. Quine writes: "... manuals for translating one language into another can be set up in divergent ways, all compatible with the totality of speech dispositions, yet incompatible with one another." (*Word and Object*, p. 27).

4. This is one way of taking the Löwenheim-Skolem theorem, the philosophical importance of which is urged by Putnam. Cf. Putnam, H.: "Models and Reality", in: Putnam, H.: *Realism and Reason*. Cambridge 1983, pp.1–25.
5. *Ibid.*

peting interpretations for the extra-logical terms in S are locked in a Zero-Sum game, and the only way for both players to score a Win is by reaching Agreement. Semantic Irrealists do not believe a Win in the above sense is possible. They believe that equally acceptable interpretations of S which are logically distinct, and perhaps even incompatible,[6] will comply with any proposed set of constraints that are scientifically plausible. Accordingly, Irrealists believe that the most that players in the interpretation game can hope to achieve is a Tie. By their lights, the interpretation game is not a Zero-Sum game. Both Realists and Irrealists agree that players can Lose, and there are ways of identifying Losses. They agree that the game admits of Wins, and that there are criteria for what counts as a Win. They disagree over what these criteria are, and whether they are or are not uniquely satisfiable. Semantic Skeptics do not believe the score in the game can be reckoned, at least in many instances. They need not be total skeptics, but only hold the view that there will be lots of matches between good and even optimal players of the interpretation game which do not deliver a result.

A major source for the view of the Semantic Irrealist is the nature of the constraints on acceptable interpretations of what a speaker's words and statements mean. Interpretations of what Paul means by the sentences he holds to be true fall under general constraints on theories of intentional behavior in which ascriptions of beliefs and desires play a central explanatory role. The interpreter of another's linguistic behavior assigns contents to the speaker's utterances and inscriptions in tandem with ascriptions of beliefs and desires. At the risk of not making sense of the speaker, the interpreter makes differences of belief between the speaker and himself explicable, and he makes the content of the speaker's linguistic behavior issue rationally from the speaker's beliefs and desires. The speaker is modeled in terms of the interpreter's implicit and informal canons of rational acceptance for propositions, dispositions to make rational inductive and deductive inferences, and patterns of rational deliberation. On the basis of considerations such as these, Irrealists can and do argue that no unique interpretation of the speaker's meanings is selected. For example, the concept of *explanation* is fundamentally a pragmatic concept. To the extent that interpretations are constrained by the concept of rational explanation, different explanations are apt for different purposes, and they are unsuited to uniquely select one of a competing set of interpretations of what a

speaker's words mean.[7] Furthermore, the interpreter's own cannons of rational acceptance, his dispositions to make inferences, and his patterns of rational deliberation do not appear to have a unique representation. To ascribe meaning to the speaker's utterances and inscriptions requires the interpreter to evaluate alternative patterns of ascription in terms of his own cognitive, connative, and affective economy, which serves as a base from which projections are made to the speaker. But representations of such global features of ours and others' psyches are constructed holistically.[8] This is apt for at least two reasons. First, holistic considerations are always relevant in assigning content to a speaker's words and statements. One needs to evaluate how competing assignments will percolate through the speaker's cognitive economy if a choice is to be made between them. Secondly, there are good reasons to believe that the operations of the psyche are intrinsically holistic as well. E.g. the so-called Frame Problem in Artificial Intelligence research is one manifestation of the holistic nature of cognitive processes. It is then argued by Semantic Irrealists that the holistic nature of the interpretation game entails that the most that players who propose competing interpretations of S can hope to achieve is a Tie. They conclude that competing interpretations of the T_i in S can be optimal when evaluated by reference to holistic considerations.

Semantic Realists are able to acknowledge the Irrealists constraints on interpretations of a speaker's words and statements, and to incorporate them into their own strategies in playing the interpretation game. Of course they do not draw the same conclusions from their adoption of these constraints. Some Realists argue that there are further constraints, overlooked by the Irrealist, that narrow the class of acceptable interpretations to one member.[9] Further, some Realists argue that the Irrealists' view has the absurd consequence that Paul, and everyone else for that matter, does not know what is meant by the sentences which are held to be true by them.[10]

6. E.g. Quine, *op. cit.*

7. Putnam urges this argument. Cf. Putnam, H.: *Meaning and the Moral Sciences*. London 1978, pp. 41–45.
8. Cf. Quine, W.V.: "Two Dogmas of Empiricism", in: Quine, W.V.: *From a Logical Point of View*. Cambridge, Mass. 1953.
9. Cf. Lewis, D.: "Putnam's Paradox", *The Australasian Journal of Philosophy* 62, 1984, pp.221–236.
10. A consequence first pressed by Bradley, M.C.: "How to Never Know What You Mean", *The Journal of Philosophy* LXIV, 1969, pp.119–124, and pressed harder (if not further) by John Searle a few years later in the same journal: "Indeterminacy, Empiricism, and the First Person", *The Journal of Philosophy* LXXXIV, 1987, pp.123–146.

The Semantic Skeptic watches the exchanges between Realists and Irrealists, and comes to the conclusion that the criteria for scoring in the interpretation game do not settle the score given the game's aims. The Realist has a concept of what a Win would be, but no way of deciding if a player has achieved a Win, since an Irrealist, arguably, will always be able to come up with a competitor which is a rival to the Realist's alleged winning interpretation of the T_i.[11] The Skeptic can simply point out that an assignment of truth-values to a set of sentences, which is the data from which the players work, and which they aim to interpret, underdetermines the assignment of extensions to the terms which feature in those sentences. All players agree on this point. The skeptic then concludes that until the problem of induction is solved for linguistic inquires, there is no way of scoring the interpretation game, apart from recognizing obvious Losses.

Realists think they hold the Ace of Trumps in the interpretation game. At least Paul knows what he means by the S_i in S, since he holds them to be true. While he may assent to some of the S_i on the basis of, say, the authority or testimony of others, while not understanding their import himself, this will be the rare exception rather than the rule. The rule for setting up S is that Paul understands that to which he assents. This is presupposed by the aim of the game, i.e. to find out what Paul means by his words and statements.

To see why the Semantic Realist takes Paul's understanding of what the sentences which he accepts mean to be conclusive in rejecting at least one of a pair of competing interpretations of the T_i in S, we need to distinguish between two different ways that the players' interpretations of the T_i in S can be rivals. In both cases, the players assign different extensions to the T_i, but the effects of the different assignments are different.

Case 1: The players assign divergent extensions to some of the T_i which result in mappings of some sentence which Paul accepts onto sentences in the players' language which differ in truth-value. In such a case, the players are proposing competing theories not only of what Paul means by the sentences to which he assents, but also of the beliefs, desires, and the intentional behaviors which they cause. The players' interpretations of the T_i serve two related purposes. First, they aim to represent what Paul means by the members of S. Secondly, the members of S so interpreted provide a basis for generating explanations of Paul's

intentional behaviors. These explanations gain support, against rival explanations, from the interpretation of what Paul means by what he says. However, the support which an explanatory theory gains against a rival theory by describing the supporting evidence in terms favorable only to itself appears to beg the question against its rival explanatory theory. Nevertheless, parallel problems arise in evaluating rival theories in the non-psychological sciences. Scientific theories provide vocabularies which are used in describing extra-linguistic data. The concept of evidence which is relevant to the confirmation or disconfirmation of scientific theories is that of linguistically represented data. It is not unusual for the linguistic representation of data against which a theory is tested to depend on that very theory.[12] When the players in the interpretation game map some sentence which Paul accepts onto sentences in their own language which differ in truth value, they are effectively making the data against which their theories are tested depend for their descriptions on those very theories. The Irreallist will explain this situation by saying that there is no "fact of the matter" that decides between rival, but optimal, interpretations of Paul's intentional states.

Case 2: The players assign divergent extensions to some of the T_i which result in mappings from the S_i to sentences in the players' language which have the same truth-values. They agree which of the members of S are true and which are false. In this case, the players agree on what the distribution of truth-values for the members of S should be. However, they do diverge in their assignment of truth-values to sentences which they take to be sentences of Paul's language, but neither they nor their negations are included in S. We stipulated that S is complete in the sense that it includes every sentence which Paul holds to be true. However, it will be incomplete in the logical sense that there will be some sentences which could be added to it without introducing inconsistency. There are infinitely many sentences in Paul's language concerning which he has no opinion. When divergent extensions are assigned to the T_i by rival players in the interpretation game, even though they agree on the distribution of truth values for the members of S, sentences in Paul's language which are not in S are mapped onto sentences in the players' language which differ in truth value.[13]

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11. Cf. Putnam, H.: "Models and Reality", and Kripke, S.A.: "Wittgenstein on Rules and Private Language".

12. Cf. N.R. Hanson's discussion of "theory laden" language in *Patterns of Discovery*. Cambridge 1958, and Thomas Kuhn's *The Structure of Scientific Revolutions*. Chicago 1962.

13. This is the form taken by Gilbert Harman's examples of

Case 1 and Case 2 provide an exhaustive classification of the ways the players' interpretations of Paul's meanings can diverge. The Semantic Realist does not believe any ontological conclusion can be drawn from disagreements between the players which fall under Case 1. Consider the players' aims from Paul's point of view. For Paul, homophonic interpretation of his own words and statements is the norm, and for the most part, it is obligatory. If Paul is confronted by a pair of rival interpretations of some S_i in S which assigns S_i different truth values, and the interpretations are equally adequate in other respects from Paul's point of view, he is thereby given good reasons for excluding S_i from S, and viewing its initial inclusion as ill considered. Ex hypothesis, Paul understands the sentences which he accepts. Any breakdown of homophony weakens this assumption. An homophonic interpretation of the T_i in S results in a pairing of each sentence in S with itself. Since no sentence can be both true and false, rival interpretations which fall under Case 1 cannot be equally correct. Either at least one of them is wrong, or the sentences on which they disagree do not belong in S. Nevertheless, it must be noted, the scorekeepers' and the players' best methods of theory evaluation may not be able to choose between the rivals.

The players' rival interpretations which fall under Case 2 agree in their assignment of truth values to the sentences which Paul holds to be true. To achieve this, they will assign the T_i identical functional and inferential roles within S. They will ascribe to Paul the same *economy* of thought and action. The differences between them concerning the contents of Paul's intentional states are not discernible within Paul's state of belief. They only appear when one considers sentences in Paul's language which do not belong to S. Rival interpretations which fall under Case 2 do not mark out divergent linguistic dispositions within Paul. Instead, they mark out divergent paths along which Paul's linguistic dispositions can evolve.

So the Semantic Realist does have criteria for what counts as a Win in the interpretation game. The Irrealist needs to provide rival interpretations which are optimal and fall under Case 1 to get the ontological conclusion that there is no "fact of the matter" concerning the contents of Paul's intentional states. From Paul's point of view, this is incoherent. So, it is incoherent. If the best the players can do is to come up with rivals that belong to the type described by Case 2, which as a matter of logic, they always can, they find themselves in Agreement on the economy of Paul's thought and action, and any residual Disagreement they have concerning the contents of Paul's thoughts are idle from Paul's point of view. So, they are idle disagreements.

The arguments we have considered are sketchy, and their gaps need to be filled in before they will convince the Irrealist. Nevertheless, as promissory notes, they do provide some consolation for the Realist. However, as we noted above, the Semantic Skeptic is apt to be unmoved. The arguments we have considered turn on mappings from Paul's language onto itself, and mappings from Paul's language onto the language of the players. The Skeptic can note that when players find their proposals fall under Case 1, they can still both be wrong, even if they can't both be right. If the criteria for evaluating interpretive hypotheses, apart from the degenerate case of homophonic interpretation, are too vague to deliver a verdict that is well founded, we will never be in a position to reckon that a player has scored a Win in the interpretation game. And the holistic nature of the relevant standards for evaluating hypotheses about what Paul means by what he says virtually insure that they are too vague.

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representations of arithmetic within different set theories. The different representations agree on the theorems of classical arithmetic, but disagree on the sentences not decided by classical arithmetic, e.g. '3 is a member of 5'. Cf. Gilbert Harman's paper "An Introduction to 'Translation and Meaning', Chapter Two of *Word and Object*", in Davidson, D., Hintikka, J. (eds.): *Words and Objections*. Dordrecht 1972, pp.14 –26.