Intentions

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Introduction

In the West we take "Spot wants to play" to be about Spot and what he wants: a desire. We understand "Flo thinks that coyotes are dogs" to be about Flo and what she is thinking: a thought she has. We take "Suzy believes that Spot will bite Puff" to be about Suzy and what she is believing: a belief she has. It seems natural to us to talk of thoughts, beliefs, and feelings as things

I will present here a different way to understand such sentences that invokes no mental objects, no talk of thoughts, beliefs, feelings, but rather ways of thinking, believing, feeling.[1]

Background: the metaphysics and parsing of our ordinary speech

I start with an assumption that is basic in our ordinary speech.

The world is made up, at least in part, of individual things.[2]

In accord with this, I will limit investigations here to sentences that are or can be construed to be about individual things, excluding an analysis of sentences that involve mass terms and process words.

Relative to this assumption, I make the following definitions.

Proposition   A *proposition* is a written or uttered sentence that is used in such a way that it is true or false, but not both.

Names   A *name* is a word that is meant to pick out a specific individual thing.

Predicates   A *predicate* is any incomplete phrase with specified gaps such that when the gaps are filled with names the phrase becomes a proposition.

A pronoun that is meant to pick out a specific object in context is a name.

I take propositions and predicates to be linguistic. Those who think that propositions are abstract or mental can take what I call a proposition to be a representative of what they consider to be a proposition. Still, those people have to rely on linguistic representations of their propositions in order to communicate with us, or more to the point, to reason with us. Similarly for predicates.

We can take the following as a simple (atomic) proposition so long as we are

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[1] This project arose in my work in *Time and Space in Formal Logic*. The presentation in that book is embedded in theories of formal logic and analyses of reasoning taking account of time. Here I hope to present the ideas and methods without appealing to formal logic while using examples only in the present tense.

I am grateful to members of the Advanced Reasoning Forum (ARF) who in online discussions helped me understand this topic, and to Arnold Mazotti who helped me clarify a nearly final draft.

[2] This seems natural to English speakers and speakers of European languages. But it is not basic for speakers of many other languages, as you can read in my *Language and the World: Essays New and Old*.

not concerned with its internal structure:

(1)   Spot is barking.

When we consider its internal structure as made up of a name and predicate, most logicians and linguists write it the same way. But doing so does not clearly demarcate the predicate from the name. To make that division clear, I'll write (1):

(2)   (— is barking) (Spot)

We can say in the logician's terminology that the condition for this to be true is that the predicate "— is barking" is true of the object named by "Spot".
    Consider, too:

    Dick is taller than Zoe.

Marking the predicate and names clearly, we have two blanks in the predicate:

    (— is taller than —) (Dick, Zoe)

The terms "Dick" and "Zoe" fill the blanks in the predicate "— is taller than —".

Predicate restrictors[3]
If we are not concerned with the internal structure of propositions, we can take the following to be a simple proposition:

(3)   Spot is barking loudly.

If, however, we wish to relate (3) to (1), we must consider its internal structure. We have (2), and we need to show the role of "loudly" in (3). That word does not apply directly to Spot, for it makes no sense to say that Spot is loudly. Rather, it is meant to apply to the predicate "— is barking". We can mark that by using a back slash to write "((— is barking) / loudly)". Then we can write (3) as:

(4)   ((— is barking) / loudly) (Spot)

The predicate in (4) is "((— is barking) / loudly)". It is simple (atomic) in that it contains no logical particles (connectives, quantifiers, etc.), though it does have internal structure. In (4) "loudly" *restricts* the predicate "(— is barking)". To evaluate whether (4) is true or false we first consider all those things for which "(— is barking)" is true, then restrict to those which are barking loudly, and then ask whether Spot is one of them. So if (4) is true, so is "(— is barking) (Spot)", and that's correct, for if (3) is true, so is "Spot is barking".

Variable restrictors
Consider:

(5)   Spot ran to Dick.

If (5) is true, so is "Spot ran". The phrase "to Dick"is acting as a restrictor. We can view "to (—)" as a variable predicate restrrictor that becomes a predicate restrictor when the blank is filled with a name. So we can write (5) as:

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[3] This analysis of predicate restrictors is developed formally in *The Internal Structure of Predicates and Names*.

$$((- \text{ ran}) / \text{to (Dick) }) (\text{Spot})$$

This, too, is a simple (atomic) proposition: it contains no logical particles. Whether it is true or false does not depend on the logic we adopt.

Now consider:

(6)   Dick threw a ball.

To evaluate (6) we ask first whether Dick threw. That makes sense even though it sounds wrong in English because we demand a direct object for "threw". But we can ask: "What did Dick throw? A ball? A stick? A rock? A dog biscuit? A banana peel?" For each of those as an answer we can say that Dick threw something. And, though it sounds odd, we can say equally that he threw. We are not going to have our metaphysics determined by the grammar of English, as if the difference between a direct object and an indirect object is based on some nature of the world. Some transitive verbs in English are not transitive in other languages and vice versa, while some languages use only a few or no prepositions.[4] So, if (6) is true, so is "Dick threw". That is what we have with predicate restrictors. But there is no mark in (6) that "a ball" is being used as a restrictor, for we do not mark direct objects in English. So let's take "obj $(-)$" as a marker for direct objects, a variable restrictor. Then we can rewrite (6), using x to stand for a pronoun "it":

There is some thing x such that:

$((- \text{ threw}) / \text{obj } (x)) (\text{Dick}) \text{ and } (- \text{ is a ball}) (x).$

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Consider:

(7)   Flo wants a dog.

Following what we did with (6) it seems we should parse this as:

(8)   There is some thing x such that:

$((- \text{ wants}) / \text{obj } (x)) (\text{Flo}) \text{ and } (- \text{ is a dog}) (x)$

But this is wrong. For (8) to be true, there has to be at least one specific dog that Flo wants. Yet Flo is wanting to have a dog without her wanting being directed to any one dog: Flo has a disposition, not a mental condition (thought) directed at some object. It is not correct to take "a dog" as a direct object of the verb "wants".

So what is the role of "a dog" in (7)? If (7) is true, then so is "Flo wants". That is, "a dog" is acting as a predicate restrictor. How can we show that? We have the predicate "$-$ is a dog". We can mark that as the restrictor, writing (7) as:

(9) $((- \text{ wants}) / (- \text{ is a dog})) (\text{Flo})$

This seems so odd to speakers of English that some explanation of a semantics that would justify (9) as true if (7) is true seems needed. I can offer one approach, though I want this analysis to be open to others. We could say that Flo has a concept of a dog, where a concept is not a fixed thing, not a mental thing nor an object, as I

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[4] See *Language and the World*.

describe in "Language-Thought-Meaning". That concept gives the way Flo wants; it is part of her disposition. Flo's whole body is involved in her wanting in that way.

Now compare:

(10) Spot wants to play.

If there is no thing that Flo wants in (7), then even more so there is no thing that Spot wants in (10), for there is not even a hint of an object in the grammar.

Suppose that (10) is true and so is:

(11) Dick wants to play.

A colleague said that we can conclude from (10) and (11):

(12) Dick and Spot want the same thing.

This is at best misleading. In (12), "thing" is no more significant than "It" is in "It's raining". Rather, Dick and Spot want in the same way. But that, too, seems wrong, for it makes ways into things. Rather, the infinitive "to play" is being used as a restrictor. We can indicate that:

((— wants) / (to play)) (Spot)

((— wants) / (to play)) (Dick)

If both (10) and (11) are true, we have:

(*)   The same predicate "((— wants) / (to play))" is true of both Dick and Spot.

We do not have to invoke some thing that both Dick and Spot want.

Sentences as restrictors

Consider now:

(13) Suzy hopes that Zoe will call.

If this is true, then so is "Suzy hopes". This suggests that "Zoe will call" is acting as a restrictor in (13). We can make that explicit by writing (13) as:

(14) ((— hopes) / (Zoe will call)) (Suzy)

It is sometimes said that using "that" creates an *oblique context* in which, in this example, "Zoe will call" appears. There are debates about whether in such a context, "Zoe will call" is or should be construed as a proposition, with the definition of "proposition" adjusted according to the answer. In (14) "Zoe will call" is viewed not as a proposition but as a restrictor. It is meant to direct us not to a way the world is or could be, but to how Suzy wants, no more a proposition than "to Dick" is in "Spot ran to Dick". This is why I do not include "that" in (14).

Those who say that "Zoe will call" as it appears in (14) is a proposition accept that its truth-value doesn't matter in evaluating (14), as it doesn't for (13). But that's to say that "Zoe will call" is not used in such a way that it is true or false, which means it is not a proposition according to the definition with which we began.

If one still contends that "Zoe will call" is being used as a proposition in (14), what if "Zoe will call" is false? Then we have to say that Suzy is hoping for some

thing false. I can't make sense of that. (If the future tense bothers you, consider "Zoe hopes that Dick washed the dishes"). What we can have as true in a model is:

> Suzy hopes Zoe will call and not-(Zoe will call)

(15) ((— hopes) / (Zoe will call)) (Suzy) and not-(Zoe will call)

Actually, if "Zoe will call" is being used as a proposition in (14), then we should rewrite (13) as:

> Suzy hopes that "Zoe will call" is true.

And here insert a resolution of the liar paradox.[5]

On the notion of proposition we started with, there is no reason to say that "Suzy will call" a proposition in (14). It is a sentence.[6] And being a sentence, it is meaningful.

But what does it mean to say a sentence is meaningful?

Meaningfulness

The sentence "Zoe will call" is meaningful. I could leave that open to many interpretations, but that is not enough here. I take the notion of meaningful as in my essay "Language-Thought-Meaning". Suzy understands the words. She might have some idea of what contexts would make it true and which would make it false, though probably she has never considered those beyond thinking of one or two possibilities, as most of us do in trying to plan. Perhaps we could say that she has some concept associated with that sentence, in the sense of a concept not being a fixed thing, not a mental thing nor an object. And that concept gives the way that Suzy hopes; it gives a disposition.

The dispositions for meaningfulness for using particular words, such as "dog" or "justice", are constrained by norms of our language community. This is what allows us to extend the idea of disposition for meaningfulness to sentences, where perhaps no one previously used "Zoe is a bipedal mammal" nor will use it again. What we have are norms of use—which include but are not limited to grammar— that constrain how we use a sentence and how we understand the sentence.

I think that most of us *understand* "Zoe will call" not as a scheme of propositions but in terms of how we understand its parts as put together according to our grammar and our norms of use.[7]

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[5] If we use "is true" as a predicate of sentences/propositions in our work, we will have to either resolve or avoid the liar paradox. See my "A Theory of Truth Based on a Medieval Solution to the Liar Paradox".

[6] It's not only that we can avoid the problems with viewing "Zoe will call" in (15) as a proposition by saying that it is sentences (wffs), not propositions, that are being used as restrictors. My approach is based on a notion of proposition that has shown its worth across all my work: the full development of classical predicate logic, including modifiers and taking account of time and space, as well as in critical thinking and essays on logic as the art of reasoning well. Perhaps all that could be done taking propositions as abstract, ignoring their linguistic representations (if they have any), but I haven't seen even a small part done.

[7] Another way to explain meaningfulness might be to return to the medieval analysis of a predicate or proposition having signification but not supposition.

Chinese

This view of intentions and meaning seems compatible with what I have learned from Chad Hansen about how pre-Han Chinese spoke and acted.[8] In "Chinese Language, Chinese Philosophy, and 'Truth'" he says:

> I shall argue that classical Chinese philosophy had a different conception of both knowledge and belief. The classical Chinese grammatical structures that we translate as belief expressions were simple two-place predicates—action expressions. I call the expressions "term-belief" contexts. Where Western philosophy of mind dealt with input, procession, and storage of content (data, information), Chinese philosophers portrayed heart-mind as consisting of dispositional attitudes to make distinctions in guiding action. Sentential belief statements represent a relation between a person and a sentence believed. Term-belief, in Chinese, represents a way of responding rather than a propositional attitude.
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> No single character or conventional string of ancient Chinese corresponds in a straightforward way to "believes that" or "belief that." No string or structure is equivalent to "believe" or "belief" in the formal sense that it takes sentences or propositions as its object. Where English would use a structure such as "King Wen believes that Ch'ang An is beautiful," pre-Han Chinese employed two different structures. The simplest uses the descriptive predicate term as the main verb, "King Wen beautifuls Ch'ang An."
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> This belief structure of ancient Chinese language signals a different philosophy of mind as well as a different epistemology. It does not generate a picture of some "mental states" with a sentential, propositional, or representational content. Corresponding to King Wen's "belief" is a disposition to discriminate among cities. He discriminates among cities in such a way that Ch'ang An falls on the beautiful side. "Beautiful-ing" a city involves both linguistic and non-linguistic dispositions, for example, King Wen's disposition to classify and distinguish things, to issue orders to his bearers, court artists, and so forth. The most straightforward evidence that he discriminates is his tendency to utter "beautiful" when the dialogue context makes Ch'ang An a topic of discussion. If we think of speech acts rather than beliefs, we will grasp the action-oriented implications of term-belief structure. Students of Chinese learn to talk about the structure as having either a "causative" or "putative" reading. We are taught to translate the sentence discussed above as either "King Wen beautified Ch'ang An" or as "King Wen regards Ch'ang An as beautiful," depending on the context.
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> . . . Deeming . . . to be beautiful or "beautiful-ing" are things we do. They are not merely the "having" of some mental "content." The dispositional analysis more naturally reflects the syntax of either term-belief structure than does the mental content analysis.   pp. 500–501

And in *A Daoist Theory of Chinese Thought*, Hansen says:

> I concentrate on a practical, social conception of language. I avoid projecting the theory of an inner mental life, consciousness, experience, and any mentalist theory of meaning. I credit all Chinese philosophers

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[8] Though not necessarily with how modern Chinese speakers speak and act, he tells me.

with the view that language is a social mechanism for shaping human behavior.   p. 269

Examples

Example 1   Suzy is afraid that Spot will bite Puff.

Analysis What is the fear that Suzy has? We describe it with a sentence. Is that the same fear she has that Dick's dog will bite Puff? Is that the same fear she has that Puff will be bitten? Is that the same fear she has that Puff will be run over by a car? We can describe these "fears" only by invoking specific sentences. Then we ask whether the resulting ways of fearing used as restrictors yield equivalent propositions. In our analysis, we write the example as:

((— is afraid) / ((((— will bite) / obj (Puff)) (Spot))) (Suzy)

Hopes, fears, desires, expectations, beliefs—we invoke these to find a thing that is the cause of how Suzy or Dick or Spot is acting. But to say that "Spot wants to play" is true because Spot has a desire to play is no more than rewriting "Spot wants to play".

Example 2   Dick and Zoe both saw something that they thought was a coyote.

Analysis   Some would conclude from the example:

Dick and Zoe had the same thought.

But what is the thought that both Zoe and Dick had? Is it some state of their brains? How do we draw equivalences of brain states? Is it conscious? Is it part of the world outside their mental lives?

These questions seem intractable. But all we need is that how they are thinking is the same, as described by the same sentence used as restrictor.

Example 3   Flo knows that Spot is a dog.

Analysis   We can write this as:

((— knows) / ((— is a dog) (Spot))) (Flo)

Knowing is something we do. There are ways to know. Knowing is not construed here as requiring a proposition or sentence as object, as in:

Flo knows that "Spot is a dog" is true.

Example 4   Flo knows how to whistle.

Analysis   Here an infinitive is used as a restrictor:

((— knows) / (to whistle)) (Flo, now)

In the Western tradition we distinguish between knowing how and knowing that. But here both are seen as ways of knowing, distinguished only by whether the restrictor of "to know" is an infinitive or a sentence.[9]

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[9] If I understand correctly from Chad Hansen's *A Daoist Theory of Chinese Thought*, pre-Han Chinese philosophers made no distinction between knowing how and knowing that. Indeed, the latter was not even considered, for they used no notion of proposition.

Example 5   Dick said that Zeke is a criminal.

Analysis   We can parse this as:

((— said) / ((— is a criminal) (Zeke)) (Dick)

There is no use-mention confusion here. "Zeke is a criminal" is a sentence but not used as a proposition nor as a quoted part of speech. It is used as a restrictor, telling how Dick said.

Example 6   Spot barked that he was hungry.

Analysis   We can parse this as:

((— barked) / ((— is hungry) (Spot))) (Spot)

We don't have to invoke Spot's thoughts or mental states to evaluate this. It's what we do normally: we say he was barking in such a way that we interpret it as showing that he was hungry.

Example 7   (a)   *Walter believes that Marilyn Monroe was an actress.*
              (b)   *Marilyn Monroe is Norma Jean Mortensen.*
Therefore   (c)   *Walter believes that Norma Jean Mortensen was an actress.*

Analysis   Is the inference valid? Walter doesn't know that Norma Jean Mortensen was Marilyn Monroe, so how could he think that Norma Jean Mortensen was an actress?

Some would say that the terms "Marilyn Monroe" and "Norma Jean Mortensen" are used here *intensionally*. But all that means is that the truth-values of (a) and (c) depend on some semantic value of "Marilyn Monroe" and "Norma Jean Mortensen" other than their reference(s). In this case, it seems, the evaluations depend on what those terms mean to Walter. But we have no way to grasp that semantic value except to track how the atomic sentences that involve referring to Walter and which have the terms "Marilyn Monroe" and "Norma Jean Mortensen " are evaluated. Or at least I see none. Talk of intensions as opposed to extensions does not clarify here.[10]

We can parse the example:

(a´)   ((— believes) / ((— was an actress) (Marilyn Monroe))) (Walter)

(b´)   Marilyn Monroe $\equiv$ Norma Jean Mortensen

      Therefore

(c´)   ((— believes) / ((— was an actress) (Norma Jean Mortensen))) (Walter)

The inference is not valid because in (a´) and (c´) different restrictors are used. The reference(s) of the names in them is not part of the evaluation of them, for there is no semantic value of these restrictors built up from their parts. Believing is something we do, and there are ways we do it.

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[10] See Chapter 13 of *The Internal Structure of Predicates and Names* for a fuller discussion of intensions and extensions.

Example 8   Dean Furtz respects Dr. E as a teacher but not as a scholar.

Analysis   The example has two propositions joined with "but", which if we are concerned only with truth-values we can treat as "and" joining two propositions:

> Dean Furtz respects Dr. E as a teacher.

> Dean Furtz does not respect Dr. E as a scholar.

We can write these as:

(a)   ((— respects) / ((— is a teacher) (Dr. E))) (Dean Furtz)

(b)   ((— respects) / ((— is a scholar) (Dr. E))) (Dean Furtz)

Since the restrictors are different, the truth-values of (a) and (b) are independent.[11]

Example 9   Dick wishes he were rich.

Analysis   We can parse this as:

> ((— wishes) / ((— is rich) (Dick))) (Dick)

But can "Dick wishes" be true absent any wish?[12]

Example 10   Zoe: How do you feel?
> Dick: *I've got a pain in my shoulder.*
> Zoe: Me, too.

Analysis   Is the pain that Dick has the same as the pain Zoe has? Can I feel the pain you have in your foot? Can anyone feel my pain? We are led to ask these questions by treating pains as things.

But Zoe is asking how Dick feels. He could say that he feels bad, or he feels happy, or he feels hungry. Or he feels pain-in-my-shoulder. That's to treat pain-in-my-shoulder as a way of feeling. We can parse the example as:

> (— feels) / (pain / in (shoulder) / of (Dick)) (Dick)

Whether you can feel my pain becomes a question of whether you can feel in the same way I do. And for that we look to behavior rather than inaccessible mental states.

Conclusion

We can understand talk of intentions without invoking mental objects, or different notions of propositions, or intensional contexts. There are ways of hoping, wanting, trying, and knowing, rather than objects of hoping, wanting, trying, and knowing.

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[11] Compare what Chad Hansen says in "Chinese Language, Chinese Philosophy, and "Truth"":

> The Mohists were testing the theory of inference which said that a *shih* base will always produce a *jan* result. They rejected the theory using argument by counterexample. Most of the counterexamples use intentional phrases; for example, the Mohist says that while her younger brother is a handsome man, her loving her younger brother is not her loving a handsome man (she loves her brother qua brother, not qua handsome man). They designed the entire essay to license departure from the inference scheme. The departure was important to a famous paradox of Mohist social-political theory; thieves are men but killing thieves is not killing men. p. 510

[12] See my "The Twenty-First or "Lost" Sophism on Self-Reference of John Buridan".

Some invoke how we speak as a major criterion in evaluating the acceptability of an analysis. This is part of a view that English "gets it right". How could we be wrong about the nature of the world? How can our grammar mislead us? It's not that we have been wrong but that there can be other ways to parse the world.[13] I am not suggesting that we replace our ordinary talk. Rather, I am trying to understand logical relations, to get clearer about our web of inferences and meaning.

But we often do talk this way when we talk about what dogs want or know. We infer from behavior for them, as we do with us. We look at how they act, not what they think. But behavior is not enough. It's true now that I wish I were a millionaire, but if I had not told you, there is nothing in my behavior that would clue you to it.

Nor is this meant to replace the current Western metaphysics of hopes and desires, thoughts and intentions. It is an alternative metaphysics, minimal in that it invokes human capabilities but not mental objects.

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[13] See my *Language and the World*.