Semantic Defectiveness: A Dissolution of Semantic Pathology

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Introduction

The Liar Paradox and its kin appear to show that there is something wrong with—something *pathological* about—certain firmly held principles, or beliefs, that are either semantic, regarding the proper treatment of our aletheic predicates, or logical, regarding certain (and usually fairly entrenched) patterns of reasoning. In general, a *diagnosis* will attempt to reveal the semantic or logical principles, or beliefs, that give rise to the impending pathology, and a *treatment* will involve a modification of those principles, or beliefs, which avoids the clearly unacceptable conclusions that the principles, or beliefs, tend to yield.[1]

It is our view that these appearances are deceiving. Although there are certain firmly held principles or beliefs that appear to give rise to impending semantic (or logical) pathology—a condition that threatens to manifest itself in a resultant inconsistency or indeterminacy—in fact, there is no such pathology. In this paper, we provide both a diagnosis and a treatment of apparent semantic pathology, explaining these appearances away without semantic or logical compromise.

Pretense and Meaninglessness

The starting point for our dissolving diagnosis of the putative cases of semantic pathology is our pretense account of "truth-talk",[2] a central aspect of which is that truth-talk (which includes the use of the falsity-predicate, as well as the truth-predicate) functions *quasi-anaphorically*, as a device of content-inheritance. But since this central aspect can be (and has been) postulated independently of a pretense account,[3] our proposed diagnosis of putative semantic pathology

should be available to some other accounts of truth-talk (e.g., many deflationary accounts[4]).

The best-known instance of apparent semantic pathology is the Liar Paradox, so we will begin with this case. Our approach to the Liar Paradox is a version of the "meaningless strategy", according to which liar sentences lack content in a certain sense.[5] This status, and the reasons it applies, is what dissolves the apparent pathology of liar sentences, by blocking the threatening resultant inconsistency from ever manifesting. Given our pretense-based approach to truth, we do not hold that the content of any sentence is constituted by, or is explained in terms of, its truth-conditions. But we do maintain that there is an important sense of content that a sentence can have that involves the sentence specifying objective, worldly conditions that can obtain or not. We call such conditions, *M-conditions*. Truth-conditions are related to M-conditions, in some respects, but the former have only a thin, derivative status, as conditions for the appropriate application of the truth-predicate. On our view, the truth-conditions for a sentence are a *by-product* of its meaning, of which M-conditions are a significant component. This is in line with the *meaning-to-truth conditional* schema,

(MTC) If S means that p, then S is true iff p,

no instance of which we reject.

Now, while a sentence like

(1) Snow is white,

specifies M-conditions directly, others specify M-conditions only indirectly. Indeed, one of the consequences of our pretense account of truth-talk is that any M-conditions specified by an instance of truth-talk (employing either the truth-predicate or the falsity-predicate) must be a function (positive or negative) of conditions specified by the supposed content-vehicle that is putatively denoted in that instance of truth-talk.

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To see this, consider a straightforward instance of truth-talk like

(2) 'Snow is white' is true.

On our view, (2) specifies indirectly just the M-conditions that (1) specifies directly. As we will show, this has an interesting consequence for liar sentences (and their putatively pathological kin): They do not specify any M-conditions.

Indeed, in the case of a liar sentence like

(L) (L) is not true,

any M-conditions that (L) specified would have to be a (negating) function of the M-conditions specified by the content-vehicle that this instance of truth-talk putatively denotes. But in this case that is "another" instance of truth-talk (in fact, it is (L) itself). This means that in order to determine the M-conditions that (L) would specify, we must look to the content-vehicle that this "other" instance of truth-talk putatively denotes. This multi-step determination process can "ground out", but in the case of (L) it repeats endlessly, with the result that (L) never manages to specify any M-conditions. In a sense, we get instructions that can never be completed. Accordingly, in the "specification of M-conditions" sense of content that we intend here, no content ever manages to attach to a liar sentence like (L).

The foregoing analysis of (L) extends immediately to another familiar case of apparent semantic pathology, viz., that exhibited in the truthteller sentence,

(K) (K) is true.

Here too we get an endless looping in the M-conditions determination process, with the result that (K) never manages to specify any M-conditions. In addition, because we take the falsity predicate to involve the same sort of indirect specification of M-conditions as the truth predicate (albeit with a negating function), the same analysis of meaninglessness also applies to what we

might call a "simple liar" sentence, such as

(SL) (SL) is false.

More complicated "multi-sentence" cases get the same diagnosis. In the familiar case of a liar loop, such as

(A) (B) is false

(B) (A) is true,

each sentence is an instance of truth-talk, and so each looks to another content vehicle for any M-conditions it might specify. As it turns out, (A) and (B) each look to the other to provide M-conditions, with the result of more endless looping—albeit with a slightly wider loop—and a failure of either sentence to specify any M-conditions.[6] The same explanation applies to the related truthteller pair,

(A') (B') is true

(B') (A') is true,

as well as to the basic case of what we call "open pairs",[7]

(I) (II) is false

(II) (I) is false,

and to the strengthened open pair,

(III) (IV) is not true

(IV) (III) is not true.

While all of the cases considered thus far involve a kind of looping, it should be clear that looping is just one way in which a failure to determine M-conditions can arise. Because the truth- and falsity-predicates serve only to effect indirect specifications of M-conditions, any circumstances in which attempts to specify M-conditions indirectly do not "ground out" in some

direct specification of M-conditions will generate a failure to specify M-conditions. Thus, our evaluation of liar sentences as meaninglessness extends beyond just other looping cases, to non-looping cases, such as the truthteller sequence,[8]

(S'_1) Sentence (S'_2) is true

(S'_2) Sentence (S'_3) is true

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.
.

(S'_n) Sentence (S'_{n+1}) is true

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.
.

as well as to Yablo's paradox,[9]

(S_1) For all $k > 1$, sentence (S_k) is false

(S_2) For all $k > 2$, sentence (S_k) is false

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.
.

(S_n) For all $k > n$, sentence (S_k) is false

.
.
.

In both of these examples, all of the sentences in both series fail to specify any M-conditions. This situation arises from the fact that any M-conditions specified by any sentence in either series would have to be inherited from sentences later in the series. In the truthteller sequence, each sentence looks to inherit the M-conditions of the next sentence in the series, but the series never ends, so no sentence in it ever specifies any M-conditions. In Yablo's paradox, each sentence could only specify M-conditions that are a function of M-conditions specified by all of the sentences that come after it in the series. Again, because the series has no end, no sentence in it ever specifies any M-conditions. Thus, the same explanation also applies to these non-looping cases of M-conditions determination failure.[10] As such, we endorse a version of the "meaningless strategy" for dealing with putative cases of semantic pathology in general.

Meaninglessness and Understanding

Any meaningless strategy for dealing with the Liar Paradox and other apparent cases of semantic pathology faces an immediate objection, which arises once we recognize that, in some sense, we *understand* the apparently problematic sentences. To simplify our discussion of this objection, we will again focus on liar sentences. Now, while we do not deny that we can understand a liar sentence like (L), it is important to note that we only understand (L) *in a sense*. We claim that there are (at least) two modes of understanding and that, while we understand (L) in one sense, we do not understand it in another. Call the sense in which we do *not* understand (L), the sense that would require knowing what M-conditions (L) specifies, 'understanding$_1$'. Call the sense in which we do understand (L) 'understanding$_2$'.

We claim that if you know the form of a sentence, the meanings of the words that are contained therein and how the sentence could be used to make a genuine assertion, then you can be said to "understand$_2$" that sentence. But if you do not know the M-conditions specified by the sentence, or even whether there are any, then, while you may understand$_2$ the sentence, you do not *understand$_1$* that sentence.

We contend that, although we understand$_2$ a liar sentence like (L), we do not understand$_1$ that sentence, since it fails to specify M-conditions and, thus, is meaningless in the way that we have indicated. The same explanation applies to the other cases of apparent semantic pathology that also fail to specify any M-conditions.

Meaninglessness, Denial, and S-Defectiveness

One consequence of our view that apparently semantically pathological sentences are contentless is relevant to those who propose a speech-act solution to the Liar Paradox, according to which

we can deny liar sentences non-assertorically—that is, by performing a speech act, opposite (or: dual) to affirming.[11] In general, the speech act of denial is used to express *rejection*, where to reject something is to be in a mental state, opposite (or: dual) to accepting it. But since rejection is a mental state, what gets rejected is not the sentence one wishes to deny; rather, one rejects *what the sentence says*, or what it *expresses*. Now, since, on our view, liar sentences lack content, it follows that they do not have anything to reject. So, on our view, one cannot deal with liar sentences by postulating non-assertoric denial of them.

Suppose that we are right and that we cannot either deny or affirm liar sentences and their allegedly semantically pathological kin, since there is nothing that they express and, hence, nothing to accept or reject. We still face the question of how we will characterize such sentences. And, as is familiar from attempted consistent solutions to the Liar Paradox, it is at this point that *revenge problems* generally emerge. While we believe that we can address these issues and avoid the usual problems they appear to generate, due to space considerations, we shall only sketch a way of dealing with them here.

We avoid the "first wave" of revenge problems because we take no positive or negative attitude towards the putatively pathological sentences, and we neither reason to or from them, or evaluate them, in the sense of ascribing them either a *logical value* or a *truth-value*. On our account of truth-talk, liar sentences do not admit of these sorts of evaluations. In particular, given our understanding of how truth-talk functions, it does not follow from the fact that a sentence has no content, that the sentence is not true. Rather, it follows that it is not aletheically evaluable at all.

Keeping in mind that, on our view, liar sentences (and their kin) cannot, in the relevant sense, be understood$_1$ and, thus, cannot be evaluated in the standard ways, we then face the

question of how we will (semantically) characterize them. In reply, we propose the following.[12]

As a means for characterizing putatively pathological sentences, we introduce a predicate, 'is semantically defective' (henceforth, 's-defective'), which, for present purposes, is to apply to those sentences, which, while perhaps understood$_2$, have no content. More specifically, we are inclined to claim the following, by way of clarifying 's-defective':

(i) If a sentence, S, is s-defective, then it has nothing, by way of content, which we can accept or reject.

And, as a result,

(ii) If S is s-defective, then S is not understood$_1$.

Moreover,

(iii) If S fails to specify any M-conditions—either directly or indirectly—then S is s-defective, and it is appropriate to attribute *s-defectiveness* to S.

Finally,

(iv) If S is s-defective, then, since S will not be understood$_1$, it is not aletheically evaluable, where, if S is not aletheically evaluable, it cannot (correctly) be assigned or denied a truth-value.

Although there is more that we might say about *s-defectiveness*, which we are importing into our vocabulary, there are two crucial points to note. First, note that 's-defective' applies directly to sentences, which do not possess content, though such sentences may be understood$_2$. (Actually, it applies to sentence tokens, though the view will not end up looking like a tokenist view, at least in any interesting sense.) Second, note that, for a given sentence, S, if it does not specify any M-conditions at all, then S is s-defective. This does not count as an *analysis* of the notion of s-defectiveness, as it leaves open the possibility that there are other ways in which a

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sentence may be deemed s-defective, but it will do, for what follows. Let us now apply this approach to sentences that putatively exhibit semantic pathology. Once again, we will begin by focusing on how it applies to liar sentences.

S-Defectiveness, Apparent Semantic Pathology, and Revenge Worries

As we saw, (L) does not specify any M-conditions, which means that, by (iii), (L) will be deemed s-defective, in which case, given the relevant instance of the T-schema,

(3) (L) is s-defective

will be true, and, thus, given the relevant identity,

(4) '(L) is not true' is s-defective

will also be true. So, again, because an s-defective claim like (L) is not truth-evaluable, from the evaluation of (L) as s-defective, it does not follow that (L) is not true (and consequently, true) because the sentence '(L) is not true' is itself s-defective. The same explanation applies to the other cases of putatively pathological sentences discussed above as well.

The pressing issue for our proposed dissolving treatment of apparent semantic pathology is whether our characterization of (L) as s-defective, and the correctness of ascribing truth to a statement of that characterization, generates other revenge problems for us. To see that it does not, consider a familiar sort of revenge problem, as found in

(λ) (λ) is not true or is s-defective,

which, without contradiction, cannot be evaluated as true, false or not true. (We leave it as an exercise to the reader, how any aletheic evaluation of (λ) results in contradiction.)

Now, we would characterize (λ) as s-defective prior to any threat of inconsistency. But if we do, further paradox appears immanent. For if we maintain that (λ) is s-defective then, as we

have seen, we will also accept that '(λ) is s-defective' is true. But now, given that evaluation, by disquotation, or-introduction, and enquotation, we seem to be committed also to the truth of '(λ) is not true or (λ) is s-defective', from whence inconsistency appears to be unavoidable. So, are we, then, mired in paradox, having attributed s-defectiveness to (λ)?

We are not, for paradox is avoided in the case our evaluation of (λ), in virtue of the fact that (λ) does not possess any content. This—rather than *ad hoc* stipulations geared at avoiding contradiction—is why we evaluated (λ) as s-defective in the first place. Our argument for the claim that paradox is avoided in this evaluation relies on two features: (a) that (λ) is without content; and (b) that if a standard, aletheically evaluable sentence is disjoined (or conjoined or otherwise extensionally connected) with a sentence that is without content then contentfulness cannot be preserved in the resulting complex sentence. We shall now motivate both (a) and (b).

Beginning with (a), in order for our attribution of s-defectiveness to (λ) to generate paradox, (λ) would have to have content, in the sense of specifying M-conditions. But it does not have content, and here is why. For any content that (λ) would have, both disjuncts are relevant and would have to contribute. This is so because the meaning of a disjunction is a function of the meanings of its parts. So, the meaning—and, thus, the meaningfulness—of (λ) relies, at least in part, on that of its disjuncts. If one of the disjuncts lacks content, then (λ) itself does, too. Accordingly, we will show that (λ) lacks content, by explaining why the left-hand disjunct of (λ) lacks content, where, recall, a given sentence lacks content if it fails to specify M-conditions.

Now, as was the situation with respect to (L), any M-conditions specified by the left-hand disjunct of (λ) would have to be a product of M-conditions specified by the putative content-vehicle that the disjunct denotes—which in this case is (λ) itself. Thus, in order for the left-hand

disjunct of (λ) to specify M-conditions, it is required that (λ) already has determined M-conditions. But, of course, M-conditions cannot be settled for (λ) unless, or until, M-conditions are determined for its left-hand disjunct. So, for any overall M-conditions to get specified by (λ), there would have to be an impossible sort of semantic bootstrapping, which means that the process for determining what M-conditions (λ) specifies never finishes. Since (λ) fails to specify M-conditions, it follows that the left-hand disjunct does not possess any content, and, so, neither does (λ) itself. (Notice, though, that both sentences can be understood$_2$.)

Tuning to feature (b) of our response to the revenge argument, here we claim that only contentful sentences may be disjoined with other contentful sentences to yield a disjunction that is, itself, contentful and thus aletheically evaluable. We will now provide support for this claim.

Although a conjunction gets its logical value from that of its conjunctive parts and a disjunction gets its logical value from at least one of its disjunctive parts, since the content of a complex sentence is a function from the contents of its parts, a disjunction in gets its content from *both* of its respective parts. What this means is that the M-conditions for a disjunctive sentence will be a function of the M-conditions for each of its disjuncts. And if one of its disjuncts specifies no M-conditions, then the disjunction itself will fail to specify any M-conditions and, because of this, will possess no content.

Now, since the sentence, '(λ) is not true', lacks M-conditions and, thus, has no content, disjoining it with another sentence yields a disjunctive string with no content. So, even though '(λ) is s-defective' has content and is true, disjoining this sentence with '(λ) is not true', in order to form (λ) itself, yields a sentence that has no content and, thus, is not aletheically evaluable. In the terminology that we favor, because (λ) fails to specify M-conditions, we claim, by (iii) above, that (λ) is s-defective. Thus, the revenge argument cannot bootstrap (λ) into

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contentfulness and thereby make it evaluable as true or false (or even as not true or not false).

Our analysis of (λ) points the way to extending the diagnosis and treatment we have given to several familiar cases of putative semantic pathology to deal with Curry's Paradox and other similarly complex cases. In a Curry sentence, such as

(C) If (C) is true, then 1=0,

what we have is a complex sentence involving an extensional connective, here, the conditional.[13] As in the case of (λ), any content this complex sentence might have (in particular, any M-conditions it might specify) would have to be a product of M-conditions specified by both parts of the complex sentence—by both the antecedent and the consequent. These sub-sentential parts would both have to contribute to the content (and meaningfulness) of the whole sentence, (C). The antecedent of (C) is the sentence '(C) is true'. Because this is an instance of truth-talk, for it to specify any M-conditions, it would have to inherit them from the putative content-vehicle picked out in this instance of truth-talk. That putative content-vehicle is the sentence, (C), itself. So, in order for the antecedent to specify any M-conditions and thereby have the relevant sort of content to contribute to the content of (C) as a whole, (C) as a whole would have to already have content to pass on to its antecedent, so that the antecedent could then contribute that content to the content of (C) as a whole. In short the antecedent and the sentence as a whole are each looking to the other to provide content. But this is just another attempt at semantic bootstrapping, so the goal cannot be fulfilled. As a result, the antecedent of (C) specifies no M-conditions and is s-defective. Since the antecedent of (C) is s-defective, the result of putting it into a complex sentence via application of an extensional operator (the conditional) results in another, complex, s-defective sentence (just as disjoining the s-defective sentence '(λ) is not true' with the non-defective sentence '(λ) is s-defective' results in an s-defective complex

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sentence). Thus, (C), along with any other example of a Curry sentence, also specifies no M-conditions and, so, is s-defective.

The same result arises for multi-sentence cases involving Curry-like conditionals, for example, what we have elsewhere called the *Curry open-pair*,[14]

(C1) If (C2) is true, then $\bot$

(C2) If (C1) is true, then $\bot$,[15]

as well as the asymmetric versions of the open pair we have developed, e.g.,

(V) (VI) is not true

(VI) If (VI) is not true, then (V) is not true.[16]

In each of these kinds of cases, both members of the pair end up being s-defective. In the first pair, (C1) relies in part for any content it might have on M-conditions being specified by its antecedent. But its antecedent would have to get any content it might contribute to the content of (C1) from (C2). (C2) relies in part for any content it might have on its own antecedent specifying M-conditions, but that antecedent would have to get any content it might contribute to the content of (C2) from (C1). But we have already seen that (C1) relies ultimately for any content it might have on (C2). In the second pair, (V) looks to specify (negatively) M-conditions indirectly, by inheriting them from (VI), but (VI) ends up lacking content for the same reasons that Curry sentences do, thereby leaving (V) contentless as well. Once again, in both pairs, each sentence (and sub-sentence) is looking for M-conditions to get specified somewhere else, with the result that none ever get specified. This makes the antecedents of the complex sentences s-defective, thereby making the complex sentences as a whole s-defective, and, as a result, making any sentences looking to inherit content from them s-defective as well.

Closing Remarks

Our analysis of the familiar cases of putative semantic pathology diagnoses them as contentless and treats them by introducing a new way of semantically characterizing them—as s-defective. This characterization is different from assigning the relevant sentences a logical value or a truth-value, at least as those notions are standardly understood. Our approach avoids revenge-problem worries via our understanding of s-defective sentences as neither aletheically nor logically evaluable, which is to say that they cannot be assessed either for truth or falsity, or for any logical values. We shall briefly explain why this is so.

In general, we ascribe truth to a sentence when we *accept* what it "says" and we ascribe falsity to a sentence when we *reject* what it "says". As noted, acceptance and rejection are mental states and are directed at the *contents* of sentences. We can thus express our acceptance of what a sentence "says" by asserting a truth-attribution to it. And we can express our rejection of what a sentence "says" either by asserting the negation of the sentence or by attributing falsity to it. But, for sentences that do not possess any content, there is nothing that can be accepted or rejected. Hence, and for the other reasons that we have provided, we cannot (correctly) assertorically attribute either the truth- or the falsity-predicate to such sentences.

Within a logic, we also talk about "logical values", which, if we stick with two-valued logic, will be the values, 1 and 0. Now, there are important questions about whether a sentence's having the logical value of 1 or 0 is to be identified with its having the truth-value, true or false. But these are not questions that we can address here. What is important, for present purposes, is that, whatever we take the logical values to be, we maintain that the only sentences that can have any of those values are the aletheically evaluable ones. Since we also contend that s-defective sentences are not aletheically evaluable, we therefore conclude that none of them possesses a

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logical value.

This might make it seem that we are committed to two-valued logic. But we are not. It is compatible with everything that we have said that the appropriate logic to endorse has more than two logical values. But, since s-defective sentences are not aletheically evaluable, they will not be among those sentences that will be assigned any logical value. Indeed, someone concerned, for example, with the indeterminacy presented in quantum mechanics may find a reason for assigning ½ to certain sentences. But she will still assign ½ only to meaningful sentences—only to sentences that are understood$_1$. (This is so, even if we assign ½ only to sentences about which we are semantically indifferent.) So, our current proposal does not involve taking a view on which logic to endorse.

A number of consistent solutions to the liar paradox attempt to unearth or uncover some features of a natural language that had not been adequately, or correctly, recognized. Thus, one finds, for example, that the existence of sentence tokens is taken by some theorists to indicate that there is a means for semantically characterizing liar sentences without falling victim to paradox.[17] Whatever the merits of such accounts, the important point is that those theorists claim to have *discovered* a way of providing a consistent solution to the paradoxes, given only the resources that are already available in, or for, a natural language.

We are *not* trying to do that. Rather than claiming to have found, in a language like English, an expression that can be used consistently to characterize liar sentences, we are proposing a new expression, which people should or could use, in order to describe sentences that fail to yield or possess any content. Thus, we are not claiming to have solved the Liar Paradox by discovering and calling attention to this or other under-appreciated features of a natural language like English. In fact, it is completely compatible with everything we have said

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here that, given certain linguistic demands (e.g., regarding expressibility), our language, or, at least, our current use of that language, results in inconsistency. Understood in this way, one of our aims in this paper was to attempt to satisfy certain expressibility demands, while dissolving the apparent threat of impending inconsistency, without logical or semantic compromise.

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[1] See Chihara, 1979 on the notions of diagnosis and treatment for semantic pathology.

[2] The original version of the pretense account appears in Woodbridge (2005). For the current, improved version, see our 2010 and 2014.

[3] See Grover, Camp, and Belnap, 1975 and Brandom, 1994, for explicitly anaphoric accounts.

[4] For instance, in addition to the accounts cited in Endnote 2, see the deflationary accounts given in Quine, 1986 and Field, 1994. For a general account of *deflationary* accounts of truth, see Armour-Garb, 2012.

[5] See Goldstein, 2001 and 2009, and Armour-Garb, 2001 and 2010, for discussion of the meaningless strategy in dealing with the Liar Paradox.

[6] See Grover, 1977 for the inspiration for this explanation. As should be clear, the loop may be made as wide as one pleases.

[7] See our 2005, 2006, 2012, and 2014. Sorensen 2001, 2003, and 2005 calls this sort of case "the no-no paradox".

[8] Kripke, 1975, p. 693; Grover, 1977, p. 597.

[9] Yablo, 1993.

[10] We will explain how to apply the diagnosis to Curry's Paradox below.

[11] For a speech act solution to the Liar Paradox, see Parsons, 1984 and Tappenden, 1993.

[12] For more on this, see our 2013 and 2014.

[13] We are assuming the conditional is the material conditional, both here and in what follows.

[14] Armour-Garb and Woodbridge, 2012.

[15] The symbol '⊥' here can be read as an expression of trivialism, i.e., "everything is true."

[16] Woodbridge and Armour-Garb, 2005 and Armour-Garb and Woodbridge, 2006, 2012, and 2014.

[17] See Goldstein, 2009.