

# *Burge's Contextual Theory of Truth and the Liar Paradox*

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## 1 Introduction

Liar sentences have bothered people for thousands of years—at least since Ancient Greece. However, a noticeably significant number of responses have been given in recent times due to, among other things, Tarski's 1933 paper and the rejection of classical logic (in particular, bivalence) by other writers. Given the following two rules of inference,

Semantic Ascent:  $\alpha \vdash \text{Tr}(\ulcorner \alpha \urcorner)$ <sup>1</sup>

Semantic Descent:  $\text{Tr}(\ulcorner \alpha \urcorner) \vdash \alpha$ ,

and the following instance of the Strengthened Liar,

$\beta$        $\beta$  is not true.

we can derive a contradiction:

- |   |  |
|---|--|
| (1) $\beta =$ ' $\beta$ is not true '.        | [Given]                                  |
| (2) Assume $\beta$ is true.                   | [For R.A.A.]                             |
| (3) ' $\beta$ is not true ' is true.          | [Substitutivity of identicals, (1), (2)] |
| (4) $\beta$ is not true.                      | [Descent from (3)]                       |
| (5) $\beta$ is not true.                      | [R.A.A. (2) – (4)]                       |
| (6) Assume $\beta$ is not true.               | [For R.A.A.]                             |
| (7) ' $\beta$ is not true ' is true.          | [Ascent from (6)]                        |
| (8) $\beta$ is true.                          | [Substitutivity of identicals, (1), (7)] |
| (9) $\beta$ is true.                          | [R.A.A. (6) – (8)]                       |
| (10) $\beta$ is true and $\beta$ is not true. | [(5) and (9)]                            |

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<sup>1</sup> Where  $\alpha \vdash \text{Tr}(\ulcorner \alpha \urcorner)$  is read, "From  $\alpha$ , you may validly infer  $\text{Tr}(\ulcorner \alpha \urcorner)$ ," and where  $\ulcorner \alpha \urcorner$  refers to the Gödel number of  $\alpha$ . The debate concerning the nature of truth is much too large to take on in this paper, but almost everybody accepts these two rules of inference. Two more rules of inference almost everybody accept as well are

Negative Semantic Ascent:  $\neg \alpha \vdash \neg \text{Tr}(\ulcorner \alpha \urcorner)$

Negative Semantic Descent:  $\neg \text{Tr}(\ulcorner \alpha \urcorner) \vdash \neg \alpha$ ,

I would want to reject the law of excluded middle and so will probably need to reject Negative Semantic Descent. If  $\alpha$  is neither true nor false, then it is not true. If it is not true, then by Negative Semantic Descent,  $\neg \alpha$  is true, which I want to reject. Regardless, I'll only be using the first two rules of inference in this paper.

Though Tarski did successfully accomplish blocking the Liar in his formulation of object language and metalanguage, most people (I think rightly) want to say that while Tarski's definitions of truth and designation are fruitful for metalogical and metamathematical theories, they are too restrictive for our *ordinary* notions of truth of meaning. Hence, Tarski's solution to the Liar is too restrictive.<sup>2</sup> A more common solution is to assert that  $\beta$  does not have a truth-value (it lacks truth conditions). The most influential response endorsing truth-value gaps is Kripke's theory of truth. He claims that the set of true sentences must be a 'fixed point' of some monotonic evaluation scheme (where he uses Kleene's strong three-valued logic). For Kripke, the extension is the set of true sentences and the antiextension is the set of false sentences (and these are disjoint sets).<sup>3</sup> Liar sentences will not appear in either set, and thus are viewed as gappy, i.e., they are ungrounded.

This common sort of response to the Liar, however, has been met with a serious problem. It is often referred to as the 'Revenge of the Liar', or 'Strengthened Liar reasoning'. The Liar's revenge is not *really* a new problem; it is simply another instance of the Liar masked for truth-value gap responses to the original Liar. Technically, the original Liar is of the following form,

$\beta_{OL}$              $\beta_{OL}$  is false.

When met with the original Liar, one can just claim  $\beta_{OL}$  cannot be true and it cannot be false, 'No problem,  $\beta_{OL}$  lacks a truth value.' However, consider again an instance of the Strengthened Liar,

$\beta_{SL}$              $\beta_{SL}$  is not true.

The Strengthened Liar is supposed to show that  $\beta_{SL}$  cannot be true, cannot not be true, and *cannot not have a truth-value*. If  $\beta$  (from now on, just assume  $\beta$  has the strengthened form) is neither true nor not true, then in particular it is not true. But if it is not true, then it seems that  $\beta$  is not true (since that is what  $\beta$  seems to tell us). Therefore,  $\beta$  seems to be *true* in an important sense;  $\beta$  is true "after all"! The same revenge problem can be applied to theories that state that  $\beta$  is meaningless or vacuous. If one claims that  $\beta$  is meaningless, then it seems that  $\beta$  would be not true; from this, we can generate a contradiction. Likewise, if one responds by claiming that  $\beta$  is vacuous, i.e., neither true nor false, then  $\beta$  in particular is not true. From this we can generate a contradiction as well. Another response might be to claim that  $\beta$  is empty, and simply does not say anything, in a similar way

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<sup>2</sup> See his "The Concept of Truth in Formalized Languages." Reprinted in his *Logic, Semantics, Metamathematics*. Oxford: Oxford University Press, 1956, pgs. 152-278. Originally published in 1933.

<sup>3</sup> See his "Outline of a Theory of Truth" *Journal of Philosophy* 72 (1975): 690-716.

that the statement ‘The moon is true’ is not true because it does not say anything. I think there are two problems with this type of response. First, names of sentences can non-problematically predicate things of themselves, as in  $\gamma$ ,

$\gamma$        $\gamma$  is composed of six words.

It seems that  $\beta$  is non-problematically predicating something of itself, just as  $\gamma$  is. Second, though some statements do lack truth conditions (viz., it is clear that interrogative sentences do, and perhaps sentences with vague predicates do too), it seems that the Strengthened Liar shows that  $\beta$  cannot be one of these instances. Once one asserts that  $\beta$  lacks truth conditions, one gets caught in its web (unlike names of interrogative sentences or sentences with vague predicates, because there is nothing paradoxical about them).<sup>4</sup> In any event, let us assume that this is right, since this is an essential factor that drives Burge to his solution to the Liar.

One response to this revenge problem is given by those who endorse a contextual approach to the semantic paradoxes. In general, contextualism is the view that there is an indexical element involved in the reasoning process of the revenge problem; given a token of the Liar sentence, the extension of true (and the antiextension of false) is contingent upon the context of utterance, and in some theories, the intentions of the speaker. Truth is an indexical notion. If a Liar sentence is not true in some context  $\Gamma_1$ , then the same Liar sentence could be true in a context  $\Gamma_2$ . There are many different contextualist theories of truth; I will, however, be examining only one. In section 2, I will explicate Tyler Burge’s theory. In particular, I will try to explain his appeal to conversational implicature and his contention that the extension of the truth predicate itself varies with shifts in context. In section 3, however, I will argue that Burge’s theory does not succeed. In particular, I will show that there is a crippling dilemma waiting for Burge’s contextualist solution to the semantic paradoxes.

## 2      **A Précis of Burge’s Theory**

Burge wants to distance himself from truth-value gap theories due to the problem just mentioned. As a result, he posits a hierarchical theory that, though similar in some respect to Tarski’s, differs by attempting to meet some of the pre-theoretic semantic intuitions Tarski’s theory did not account for. He does this by claiming that there is (1) a hidden conversational implicature and (2) a shift in extension (parallel with a shift of context) that occurs in Strengthened Liar reasoning. This is what I’ll attempt to explain in this section. Strengthened Liar reasoning runs the following course:

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<sup>4</sup> There is an entire volume devoted to this problem; see JC Beall, *Revenge of the Liar: New Essays on the Paradox*, Oxford: Oxford University Press, 2008.

- Step 1. An occurrence of a Liar like sentence.
- Step 2. The Liar sentence is not true.
- Step 3. The Liar sentence is true after all.

Most solutions to the Liar have either ignored such reasoning or attempted to block it by formal means. Burge, on the other hand, thinks a more satisfying approach is to interpret the reasoning so as to justify it. He thus takes the Strengthened Liar as a model for how we *should* think when confronted with the semantic paradoxes. Consider the following, very plausible scenario (and notice the corresponding Steps 1 - 3):

Suppose I *think* both that I am in 398 DODD and that the professor, at this moment, in 399 DODD is a fraud. So I write on the board at 4:00P.M. on 5/21/09, (Step 1) ‘There is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is true as standardly construed.’ However, unbeknownst to me, I am in fact the one in 399 DODD, and this is the only sentence written on the board. The usual reasoning shows that this cannot have truth conditions; thus, it is not true. (Step 2) So there is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is true as standardly construed. But we have just stated the sentence in question. (Step 3) Thus, it is true after all.

In Steps 1 through 3, Burge argues that there does not seem to be a change of grammar or meaning of the expressions involved. If this is true, then the shifts in evaluation should be explained pragmatically. However, in Steps 2 and 3 we seem to both predicate truth and not predicate truth of the same sentence. Pragmatics cannot account for this, and so there must be a shift in extension for the predicate ‘is true’. Thus, Burge argues that the conversational implicature occurs between Steps 1 and 2, and the shift in extension (and likewise, a shift of context) occurs between Steps 2 and 3. I will discuss reasons for these conclusions in order.

But before I do that, I should give some preliminary definitions and explanations of special *terms* and *notation* Burge uses. *Pathologicality* is a disposition to produce disease for certain semantical evaluations. The Truth Teller (i.e., a sentence which says of itself that it is true) comes out pathological, as does the Liar. *Rootedness* is understood as the lack of pathologicality, i.e., a formula’s being *rooted* means that it is nonpathological.<sup>5</sup> In Step 2, we claim that the Liar sentence is not true—Burge marks this context of utterance true<sub>i</sub>. In Step 3, and from a broader application of truth, we claim that the Liar is true—Burge

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<sup>5</sup> Rootedness is essentially the same notion as groundedness in Kripke’s theory.

calls this context of utterance  $\text{true}_k$ , where  $k > i$ . These contexts of utterance will be made more explicit in (2.a) and (2.b) below.

2.a *Implicature in Steps 1 and 2*

As I've already noted, Burge does not see any grammatical or semantical changes in Steps 1 through 3. Burge thinks that *somewhere*, there must a shift in extension for 'true'—the Liar is allegedly *not true* in Step 2 and *true* in Step 3, and so the extension of true seems to be shifting. What Burge first wants to argue is that (i) there cannot be a shift of extension in Steps 1 to 2, and so these steps must be explained *pragmatically*. He gives the following argument against the idea that there is an extensional change of context here. Recall the scenario with me in 399 DODD. Suppose there indeed *was* a shift of extension between Steps 1 and 2. Let us make explicit the extension of 'true' as it occurs in the pathological sentence token, by marking it with a subscript:  $\text{true}_i$ . We will call the sentence token (with the explicit extension of  $\text{true}_i$ ) in Step 1 ( $\alpha$ ),

- ( $\alpha$ ) 'There is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is  $\text{true}_i$ .'

If we suppose that there is a broadening of extension, the sentence token in Step 2 yields ( $\beta$ ),

- ( $\beta$ ) 'There is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is  $\text{true}_k$ .'

But this misses the idea Step 2 was originally mean to capture; namely, whether ( $\alpha$ ), given a context, is  $\text{true}_i$  or not  $\text{true}_i$ . The *first* thing we want to say is that ( $\alpha$ ) is in some sense not true, not that it is true! We're not yet ready to broaden the extension and claim that *anything* is true. Thus, we should not say that ( $\alpha$ ) in Step 1 is  $\text{true}_k$ , but rather that it is not  $\text{true}_i$ —because it lacks  $\text{true}_i$  conditions. So at Step 2, instead of ( $\beta$ ) we should assert ( $\beta'$ ),

- ( $\beta'$ ) 'There is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is  $\text{true}_i$ .'

So there cannot be a shift in extension between ( $\alpha$ ) and ( $\beta'$ ), i.e., Steps 1 and 2, because they are identical! In other words, if we suppose that there is a shift of extension between Steps 1 and 2, we abandon the Strengthened Liar reasoning (which we set out to justify) by confusing what Step 2 was originally meant to do. So the argument goes.

For Steps 1 and 2, if there is no grammatical (or semantic) changes in meaning, nor is there a shift in extension of the truth predicate, the change must

be explained pragmatically. And so Burge attempts to explicate this pragmatic change in terms of implicature. He proposes the following implicature: *sentences being referred to or quantified over are to be evaluated with the truth schema for the occurrence of 'true' in the evaluating sentence.*<sup>6</sup> This gets fleshed out in the following way. In Step 1 the implicature is that the sentence quantified over should be evaluated with a truth schema containing  $\text{true}_i$ . However, the sentence turns out to be the problem sentence itself, and accepting this implicature engenders a contradiction. In Step 2, the implicature of Step 1 has been canceled. The problem sentence as it occurs in Step 2 is not  $\text{true}_i$  [in the same way that it was not  $\text{true}_i$  in Step 1], but it no longer has  $\text{truth}_i$  conditions. This leads to the next move.

## 2.b *The Shift in Extension in Steps 2 and 3*

Though there is not a shift in extension in Steps 1 and 2, there must be a shift in extension *somewhere* to account for the fact that both *truth* and *non-truth* are predicated of the Liar. This is the most appropriate place for such a shift to occur. The shift from Step 2 to 3 involves a transition from a pathologically not-true sentence to a nonpathological true sentence—and this is the same sentence. Burge explains this move by regarding semantical predicates as indexical, and provides a formal language intended to model natural language. He gives both formal (structural) principles which govern the relations between extensions of different occurrences of 'true', and pragmatic (material) conditions which govern how the extension of indexical occurrences are established in context. I will briefly discuss each in turn.

*2.b.1 Formal Principles.*<sup>7</sup> Burge wants to stipulate a formal system (which matches English) that *defines* a pathological<sub>*i*</sub> sentence, as interpreted in a context. He then wants to show that though (i) pathological<sub>*i*</sub> sentences are not  $\text{true}_i$ , (ii) pathological<sub>*i*</sub> sentences are nonpathological<sub>*i+1*</sub>, and thus  $\text{true}_{i+1}$ . Burge's Language  $\mathcal{L}$  is a first-order language with sufficient resources to express arithmetic and set theory. Its variables are as follows:

1. Individual variables:  $y, y_1, y_2, \dots$ ;
2. Variables over sequences:  $\alpha, \alpha_1, \alpha_2, \dots$ ;
3. Variables over terms of  $\mathcal{L}$ :  $t, t_1, t_2, \dots$ ;
4. Variables over variables of  $\mathcal{L}$ :  $x, x_1, x_2, \dots$ ;
5. Variables over well-formed formulas of  $\mathcal{L}$ :  $\phi, \phi_1, \phi_2, \dots$ ;

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<sup>6</sup> Burge, 95.

<sup>7</sup> I'll only be discussing Burge's third formal construction—his preferred construction.

$\mathcal{L}$  also possesses two infinite collections of dyadic semantic predicates that are subscripted by numerals:

6. Rootedness Predicates:  $R_1, R_2, R_3, \dots$ ;
7. Satisfaction Predicates:  $Sat_1, Sat_2, Sat_3, \dots$ .

Remember, pathologicity is understood as rootlessness. It is characterized in  $\mathcal{L}$  recursively as follows:

- (0)  $R_i(\varphi, \alpha)$ , where the largest subscript in  $\varphi < i$ .
- (1)  $R_i(\lceil Sat_i(t, t_1) \rceil, \alpha_1)$  and  $R_i(\lceil R_i(t_1, t) \rceil, \alpha_1)$ , provided that  $R_i(\alpha_1(t_1), \alpha_1(t))$ .
- (2)  $R_i(\varphi, \alpha) \rightarrow R_i(\lceil \neg \varphi \rceil, \alpha)$ .
- (3)  $R_i(\lceil \varphi \rightarrow \psi \rceil, \alpha)$ , provided that  $Sat_i(\alpha, \lceil \neg \varphi \rceil)$  or  $Sat_i(\alpha, \psi)$ , or both  $R_i(\varphi, \alpha)$  and  $R_i(\psi, \alpha)$ .
- (4)  $R_i(\lceil (x)\varphi \rceil, \alpha)$ , provided that either  $(\alpha_1)R_i(\varphi, \alpha_1)$  or  $(\exists \alpha_1)[\alpha_1 \approx_x \alpha \ \& \ Sat_i(\alpha_1, \lceil \neg \varphi \rceil)]$ .<sup>8</sup>
- (5)  $R_i(\varphi, \alpha)$ , only if it is so determined by (0) – (4) or analogues.
- (6)  $\neg R_i(\varphi, \alpha) \rightarrow \neg Sat_i(\alpha, \varphi)$ .

All rootless<sub>*i*</sub> sentences are not true<sub>*i*</sub>. So a sentence and its negation may be not true<sub>*i*</sub>, though one or the other will be true<sub>*i+1*</sub>. Then Burge gives the usual Tarskian recursive definitions of *truth* for negation, material conditional, the quantifiers, etc.:

- (7) Let  $\varphi$  be an atomic sentence such that  $\varphi = \lceil P(t_1, t_2, \dots, t_n) \rceil$ . Then  $Sat_i(\alpha, \varphi)$  iff  $P(\alpha(t_1), \alpha(t_2), \dots, \alpha(t_n))$ , provided that  $R_i(\varphi, \alpha)$ .
- (8)  $Sat_i(\alpha, \lceil \neg \varphi \rceil)$  iff  $\neg Sat_i(\alpha, \varphi)$ , provided that  $R_i(\lceil \neg \varphi \rceil, \alpha)$ .
- (9)  $Sat_i(\alpha, \lceil \varphi \rightarrow \psi \rceil)$  iff  $[Sat_i(\alpha, \varphi) \rightarrow Sat_i(\alpha, \psi)]$ , provided that  $R_i(\lceil \varphi \rightarrow \psi \rceil, \alpha)$ .
- (10)  $Sat_i(\alpha, \lceil (x)\varphi \rceil)$  iff  $(\alpha_1)(\alpha_1 \approx_x \alpha \rightarrow Sat_i(\alpha_1, \varphi))$ , provided that  $R_i(\lceil (x)\varphi \rceil, \alpha)$ .

Axioms (7) – (10) imply the following restricted Tarskian truth schema:

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<sup>8</sup> Where  $\alpha_1 \approx_x \alpha$  means ‘ $\alpha_1$  differs from  $\alpha$  at most in its assignment to  $x$ .’

$$(T) \quad R_i(S, \alpha) \rightarrow \cdot \text{Sat}_i(\alpha, S) \leftrightarrow p,$$

where ‘S’ names any well-formed sentence of  $\mathcal{L}$  and ‘p’ is the sentence itself. These comprise the main formal principles of  $\mathcal{L}^9$ . The pressing question remains: *how does any of this work for English? How do these hierarchical subscripts get fixed?* This leads to our next section.

*2.b.2 Pragmatic Principles.* Burge provides the following plausible pragmatic rules for determining how the subscripts are established in context.<sup>10</sup>

*Justice* = Subscripts should not be assigned so as to count any given sentence substitutable in a truth schema instead of another, without some reason.

*Verity* = Subscripts on occurrences of ‘true’ (or ‘satisfies’) are assigned so as to maximize the acceptability of truth schemas to sentences and minimize attributions of rootlessness.

*Minimalization (Beauty)* = The subscript on occurrences of the predicate ‘true’ (or ‘satisfies’) is the lowest subscript compatible with the other pragmatic principles.

First, notice how the formal and pragmatic principles apply to the Strengthened Liar (notice the brackets indented to the right):

- |         |         |                                      |   |
|---------|---------|--------------------------------------|---|
| Step 1. | $\beta$ | $\beta$ is not true.                 | [i.e., a Liar token.]                                   |
| Step 2. |         | The Liar sentence is not true.       | [i.e., $\beta$ is not true <sub><math>t</math></sub> .] |
| Step 3. |         | The Liar sentence is true after all. | [i.e., Step 2 is true <sub><math>t</math></sub> .]      |

For a more complicated version, consider how Burge’s formal and pragmatic principles apply to Kripke’s version of the Deferred Liar. Suppose Dean utters,

$$(D) \quad \text{All Nixon’s utterances about Watergate are untrue.}$$

And then suppose Nixon utters,

<sup>9</sup> Burge also stipulates that truth is cumulative,

$$(11) \quad \text{Sat}_i(\alpha, \varphi) \rightarrow \text{Sat}_{i+1}(\alpha, \varphi),$$

and iteration is expressed by the following,

$$(12) \quad \text{Sat}_i(\alpha, \varphi) \rightarrow (\alpha_1)(\alpha_1(t) = \alpha \ \& \ \alpha_1(t_1) = \varphi \ . \rightarrow \text{Sat}_{i+1}(\alpha_1, \lceil \text{Sat}_i(t, t_1) \rceil)).$$

<sup>10</sup> I’ll mention the third pragmatic rule as well, even though it was not introduced until his later paper, *The Liar Paradox* (and his 1982 postscript to *Semantical Paradoxes*).

(N) Everything Dean utters about Watergate is untrue.

By the principle of Justice, each person's truth predicate should be assigned the same subscript,  $i$ . By the principle of Verity,  $i$  must be high enough to interpret any statement by Dean or Nixon other than (D) or (N). By the principle of Minimalization,  $i$  must be no higher. If Dean uttered at least one truth $_i$  about Watergate, then Nixon's (N) is rooted $_i$  and not true $_i$ . If none of Nixon's utterances other than (N) are true $_i$ , then, since (N) is not true $_i$ , Dean's (D) is true $_i$ . If Nixon did say something true $_i$  about Watergate other than (N), then Dean's (D) is rooted $_i$  but not true $_i$ . Now suppose that no utterance about Watergate other than (D) by Dean is true $_i$ . If none of Nixon's utterances other than (N) are true $_i$ , then neither utterance is rooted $_i$  and both vacuously not true $_i$ . If at least one of Nixon's utterances other than (N) is true $_i$ , then Dean's utterance is rooted $_i$  and not true $_i$ , and Nixon's utterance is rooted $_i$  and true $_i$ .<sup>11</sup>

### 3 Evaluating Burge's Contextual Theory of Truth

The initial appeal of contextual approaches to the semantic paradoxes is that they accord with some of our intuitions about how truth works, and in particular, how Strengthened Liar reasoning should proceed. As enticing as this appeal might be, there are some worries with Burge's contextual theory that throw doubt on whether this type of response to the Liar is, in fact, the right type of response. I will mention two worries. The first is a worry for all contextual truth theories—namely, that there is a sketchy rule of inference presupposed in such theories. The second narrowly applies to Burge's theory and concerns his brief discussion on the possibility of generating a 'Super-Liar' against his theory.

The first worry runs as follows. Contextual theories that utilize hierarchical solutions to the semantical paradoxes do not provide justification for the liberties they take in their rules of inference. The normal contextual truth-theory reasons in the following way regarding the Strengthened Liar,

- (1)  $\alpha =$  ' $\alpha$  is not true'. (A plain fact.)
- (2)  $\alpha$  is paradoxical. (By observation of what follows from (1) by the standard liar reasoning, rehearsed above.)
- (3)  $\alpha$  is not true. (From (2).)
- (4) ' $\alpha$  is not true' is true. (Ascent from (3).)
- (5)  $\alpha$  is true. (From (1) and (4).)
- (6)  $\alpha$  is both true and not true. (From (3) and (5).)

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<sup>11</sup> See Burge, *Semantical Paradox*, p. 110, and Burge, *The Liar Paradox*, pp. 360-361.

So, according to the contextualist, (6) really means that  $\alpha$  is true in one context and not true in another context. A more appropriate way to reason (to accord with the contextualist) is like this,

- (1')  $\alpha_c = \text{'}\alpha_c \text{ is not true in context } \Gamma\text{'}$ .
- (2')  $\alpha_c$  is paradoxical in context  $\Gamma$ . (By some unspecified line of reasoning.)
- (3')  $\alpha_c$  is not true in context  $\Gamma$ .
- (4')  $\text{'}\alpha_c \text{ is not true in context } \Gamma\text{'}$  is true in context  $\Delta$ . ( $\alpha_c$  is “after all” true.)
- (5')  $\alpha_c$  is true in context  $\Delta$ .
- (6')  $\alpha_c$  is true in  $\Delta$  and not true in  $\Gamma$ .

(6') is clearly not a contradiction, but there doesn't seem to be any reason to think that it follows from (1'). It is plausible to think that the move from (3) – (4) is valid by ascent, and this is the phenomenon that generates the original paradox. But it is not so obvious with the move from (3') – (4').<sup>12</sup> This is not an instance of ascent, but something else that doesn't seem valid. So what we've been calling semantic ascent would need to be modified in the following type of way:

$$\text{Semantic Ascent}_{\text{CONTEXT}}: \alpha_{\Gamma} \vdash \text{Tr}_{\Gamma+1}(\ulcorner \alpha \urcorner)^{13}$$

The contextualist has not provided any justification for accepting this additional rule of inference, and thus, the contextual approach makes a unwarranted leap in (1') – (6'). It seems that Burge, and contextualists in general, would need to provide some reason for taking the liberty to infer in this way. It's not obvious why we should accept this type of inference.

The second worry, which is the more serious worry, runs as follows. A threat to contextualism emerges when the Strengthened Liar is formulated in a way that poses problems for *it* as well; this formulation is known as the Super-Liar. What type of response can the contextualist provide for sentences like ‘This sentence is not true in any way, in any context’? or sentences like  $(\psi)$ ?

$$\psi \quad (\forall i) \psi \text{ is not true}_i$$

There are two things I will argue in this section. First, there are various formulations of Super-Liars and they do seem to offer a *prima facie* problem for Burge. However, Burge, in his original paper, knows this and gives a response in

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<sup>12</sup> See Gauker, “Against Stepping Back: A Critique of Contextualist Approaches to the Semantic Paradoxes” *Journal of Philosophical Logic* 35 (2006): 393-422.

<sup>13</sup> Which would say something like, from  $\alpha_{\Gamma}$  (where  $\Gamma$  is an assigned context) you can infer that  $\alpha_{\Gamma}$  is true at context  $\Gamma+1$ , i.e., a completely different context.

advance. What seems to be puzzling is that no one seems to address his response. They just assume that the Super-Liar works. It does work; but it won't satisfy Burge because it does not address his antecedent response. Second, what I'm going to argue is that a formulation of a Super-Liar won't disprove Burge's theory *alone*. The really devastating problem emerges when we put pressure on Burge's antecedent response.

Before I show this, notice one formulation of the Super-Liar.<sup>14</sup> Suppose that the context sensitive truth-theory for a language L is completely expressible in L (including a function that specifies the dependence of the domain of quantification on contexts). It seems then that we will be able to give a theory of truth for L (in particular, for sentence-tokens that quantify over levels), a theory that will determine what the domain of quantification of a given quantifier token is, and thereby determine whether the sentence-token is true<sub>i</sub> or not for any *i*. We can construct the following Super-Liar (given that L is diagonalizable, contains set theory, and maintains that contexts collectively form a well-orderable class):

$\varphi$        $\varphi$  is not true<sub>i</sub> at any level *i* up through  $F(c, \varphi)$ ,

where  $F(c, x)$  returns the least level (ordinal)  $\alpha$  such that,  $x$  is true <sub>$\alpha$</sub>  in context  $c$ , where  $c$  is  $f(x)$ , the least context in which  $x$  is uttered. Therefore, in context  $c$ , we have the following dilemma; either

- (1)  $\varphi$  is not-true<sub>i</sub> at every level *i*, in which it ought to be true at some level (i.e.,  $F(c, \varphi)+1$ ), or
- (2)  $\varphi$  is true at some level, and  $F(c, \varphi)$  specifies the least such level. In that case,  $\varphi$  ought to come out false at that level, since it says that there is no such level up through  $F(c, \varphi)$ .

Though this seems to be a significant objection to Burge's theory, what this and every other formulation neglect to take into account, is Burge's response (in the original article!). Foreseeing this possible response, Burge writes, "Attempts to produce a 'Super Liar' parasitic on our symbolism tend to betray a misunderstanding of the point of our account. For example, one might suggest a sentence like (a), '(a) is not true at any level'. But this is not an English reading of any sentence in our formalization. Our theory is a theory of 'true', not 'true at a level'."<sup>15</sup> Critics don't seem to take into account what Burge says about the

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<sup>14</sup> This is given by Cory Juhl. See his "A Context-Sensitive Liar" *Analysis* 57, no. 3 (1997): 202-204. Another example of a Super-Liar is provided by Gauker (p. 413).

<sup>15</sup> See "Semantical Paradox", p. 108.

Super-Liar; and this is where the serious problem is. I'm going to argue that Burge's response *cannot* be right, because of a crippling dilemma that emerges. Remember, Burge wants to argue that our *ordinary* notion of truth is indexical, and it shifts in extension in Strengthened Liar reasoning. This diagnosis was supposed to match our pre-theoretic semantical intuitions. If we grant Burge this point, then he is obligated to give us an account of the Super-Liar because the *same sort of truth* is utilized in both kinds of Liars. Notice them again.

$\beta$	$\beta$ is not true.
$\beta_{\text{Super}}$	$\beta_{\text{Super}}$ is not true at any level.

Burge wanted us to conceive of  $\beta$  as possessing our *ordinary* notion of truth. This is why he gives an example similar to the one I give, where I am in DODD 399 with certain false beliefs, and I state, 'There is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is true as standardly construed.' Burge argued that Tarskian and Kripkean theories wrongly conceive of truth in Liar instances, because they assume they are dealing with some technical notion ('Truth in L', or something). Now, imagine me in the same scenario above with the same false beliefs. But now, suppose that I *also* believe Burge's formal and pragmatic principles of  $\mathcal{L}$ —and use them in thinking about true sentences of English. Suppose I then state 'There is no sentence written on the board in 399 DODD at 4:00P.M. on 5/21/09 which is true in any context, that is, at any level of evaluation (That's how certain I am about this faulty professor next door!).' It seems very plausible that I could do such a thing. But in his response, Burge claims that Super-Liars are not instances of our *ordinary* notion of truth. What seems right to me is that both the Strengthened Liar and the Super-Liar stand or fall together, i.e., they are either both statements about our *ordinary* notion of truth, or both statements about some technical notion of truth. And so Burge's theory falls in the following dilemma: Either the Super-Liar possesses truth-at-a-level, in which case, so does the Strengthened Liar, or the Super-Liar does not possess truth-at-a-level, and instead possesses the *ordinary* notion of truth. If the former is correct, we should recall that the initial plausibility of Burge's position was due to the fact that it could explain the Strengthened Liar in terms of our *ordinary* notion of truth—If we choose this horn, then the initial reasons for Burge's theory seem to be significantly weakened. If the latter is correct, then Burge owes us an account of how his theory deals with the Super-Liar (*viz.*, the formulation mentioned above and every other formulation). Either way, Burge's theory seems to be in a serious predicament.

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