# Alethic Pluralism and Logical Form

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## 1. Introduction

The traditional metaphysics of truth has been strongly monistic. It has presupposed everything true shares a property, *truth*, with a single, invariant nature. For example, a traditional correspondence theory of truth might identify *truth* with the property of corresponding to fact. Consequently, subject-matters without facts (such as ethics or basic taste, perhaps) are subject-matters without truth. A traditional epistemic theory of truth might identify *truth* with warranted assertibility, thus constraining the scope of truth to what could be established by possible evidence

Pluralist alternatives to the traditional metaphysics of truth have grown popular over the past 30 years. Pluralism has two main strands, which depart from traditional monism in different ways.[[1]](#footnote-1) One strand is “strong alethic pluralism.” It rejects truth as a single robust property all true sentences share. Instead, it claims ‘true’ designates different properties for different sorts of sentences. For example, it might designate *corresponding to a fact* when applied to sentences about science and *cohering with a system* when applie to sentences about ethics.[[2]](#footnote-2) The other strand is “moderate alethic pluralism.” Unlike traditional monism, moderate pluralism holds that different kinds of sentences are true in different ways. But unlike strong pluralism, it says those are all different ways of instantiating one and the same property, *truth*.

The most influential objection to strong alethic pluralism is the “problem of mixed compounds” (Tappolet, 1997). Suppose ‘true’ designates a correspondence property when applied to sentences about which things are cats, but it designates a coherence property when applied to sentences about which things are beautiful. Then what does ‘true’ designate for ‘Tabby is a beautiful cat’? More generally, if ‘true’ designates different properties for ‘*p*’ and ‘*q*’, what does it pick out for truth-functional combinations of those sentences?

Mixed compounds are not problematic for traditional monism or moderate pluralism. On those views, ‘true’ always designates *truth*, regardless of the structure, subject-matter, or complexity of the sentences it is applied to. The views do owe accounts of how different sorts of sentences instantiate that property, and such accounts are not trivial to produce. Still, they don’t have a problem identifying the property whose instantiation is at issue. The property is *truth*, the same one ‘true’ designates when applied to logically simple sentences.

Strong pluralists have often supposed ‘true’ designates properties such as correspondence or coherence, depending only on the subject matter of the sentences it is applied to. Logically complex sentences can have mixed subject matters, though. That makes it mysterious what ‘true’ designates when applied to them. For ‘Tabby is a beautiful cat’, neither correspondence nor coherence is an attractive candidate. Correspondence is too demanding if there’s no such fact as Tabby’s being beautiful. Coherence is too easy, as the sentence could be part of a coherent system even if Tabby weren’t a cat.

Will Gamester (2019) has proposed a solution to the problem for strong pluralists. On his approach, ‘true’ designates different properties for sentences with different logical forms. As applied to ‘Tabby is a beautiful cat’, ‘true’ designates neither correspondence nor coherence. Rather, it designates a special property unique to conjunctions of atomic sentences from different domains. More specifically, ‘true’ designates the property of being a conjunction of a biological claim that corresponds to fact with an aesthetic claim that coheres.[[3]](#footnote-3)

After setting out his theory, Gamester challenges monists “to articulate some shortcoming [that] the pluralistic theory [he has] articulated has with regards to logic or logical form in virtue of being pluralistic” (p. 41). This paper answers Gamester’s challenge by outlining three such shortcomings. To preview, the shortcomings are:

*Shortcoming #1:* On its intended, pluralist interpretation, the theory is at an explanatory disadvantage compared to monistic theories.

*Shortcoming #2:* The theory puts an unmotivated syntactic constraint on the metalanguage in which ‘true’ is defined, requiring it to include all the connectives of the object language.

*Shortcoming #3:* Avoiding *Shortcoming #2* means facing a dilemma between (a) choosing arbitrarily which of multiple, equally good candidates ‘true’ designates for a given sentence, or (b) supposing ‘true’ designates indefinitely many distinct properties at once when applied to a given sentence.

Sections [2](#Pluralism_Monism_and_Recursive) and [3](#Gamesters_Theory) take some preparatory steps. Section [2](#Pluralism_Monism_and_Recursive) further describes traditional monism, modest pluralism, and strong pluralism, with special attention to the place of recursive analyses in monist views of truth. Section [3](#Gamesters_Theory) sketches Gamester’s strong pluralist theory, and Section [4](#The_Three_Shortcomings) describes its shortcomings.

## 2. Pluralism, Monism, and Recursive Analyses

For the purposes of this paper, we can divide theories of truth into three broad families: traditional monism, moderate pluralism, and strong pluralism.[[4]](#footnote-4) Different versions of these theories are framed in terms of propositions, sentences, statements, or something else as the primary truth-bearers. Some address themselves directly to the predicate ‘true’, while others address the concept TRUE in the first instance. I’ll frame the issues, as Gamester does, in terms of sentences and the predicate ‘true’.

Traditional monism construes *truth* as a single, first-order property. ‘True’ designates that property, and its nature is constant. All true sentences instantiate *truth*, and they do so by virtue of instantiating the same underlying nature of truth, such as *corresponding to fact* or *being part of a coherent system*. The classical view of truth as “agreement with reality” is a traditional monist theory: *Truth* is agreement with reality, and every true sentence is true by virtue of agreeing with reality. The traditional monists’ slogan is, “Truth is one.”[[5]](#footnote-5)

Moderate pluralists agree with traditional monists that ‘true’ designates a single property, *truth*, shared by all and only true sentences. But they think of *truth* as a property that can be instantiated in a variety of ways. Some sentences instantiate *truth* by corresponding to facts. Others are true in virtue of their place in a coherent system. *Truth* itself is the higher-order property a sentence has when it has a property that “realizes” or “manifests” *truth*.[[6]](#footnote-6) Because moderate pluralism says ‘true’ always designates the same property, ‘moderate monism’ is an equally apt name for it. The view is “pluralist” only in holding that different sorts of claims instantiate *truth* in different ways. The slogan for moderate pluralists is, “Truth is one and many.”[[7]](#footnote-7)

Strong pluralists deny ‘true’ designates the same property for all kinds of sentences (Kim and Pedersen, 2018).[[8]](#footnote-8) “Truth” (i.e., the property ‘true’ designates) might be correspondence for biological sentences, but ‘true' might designate membership in a coherent system for aesthetic sentences. There is no single property, *truth*, that all and only true sentences share (except, perhaps, the utterly trivial property of being in the extension of ‘true’). The slogan for strong pluralists is, “Truth is many.”[[9]](#footnote-9)

Strong and moderate pluralism are distinct positions. They mean different things by claims such as “Truth is one thing for sentences about science and something else for sentences about morality.” For a moderate pluralist, such claims involve the ‘is’ of constitution, grounding, or realization. ‘Tabby is a cat’ corresponds to fact, and it also instantiates *truth.* The former state of affairs realizes, grounds, or constitutes the latter, distinct state of affairs. For a strong pluralist, the claims employ the ‘is’ of identity. The sentence’s being true and its corresponding to fact are one and the same state of affairs. The property of *corresponding to fact* is numerically identical with the property ‘true’ designates as applied to ‘Tabby is a cat’.

Here is an example to highlight the difference. Suppose both a moderate pluralist and a strong pluralist claim that truth “is” correspondence for sentences about which things are cats and that it “is” coherence for sentences about what is morally wrong. Also suppose ‘Tabby is a cat’ is true and ‘Murder is wrong’ is true. The *moderate* pluralist will say the two sentences share a robust property, *truth*, that is grounded in former’s corresponding to a fact and in the latter’s coherence with a system. ‘True’, as applied to each sentence, designates *truth* and not the underlying properties that ground it. The *strong* pluralist, on the other hand, holds that ‘true’ designates *correspondence* when applied to ‘Tabby is a cat’ and *coherence* when applied to ‘Murder is wrong’. It doesn’t designate an overarching property, *truth*, the sentences have in common; the only substantive distinctive feature all and only true properties share is that they are in the extension of ‘true’.

To avoid conflating strong and moderate pluralism, I will avoid describing strong pluralist positions as views about what truth “is,” and I’ll mostly avoid some word-saving shortcuts strong pluralists often take, including such terms as ‘truth-property’ or ‘truth-reducing property’ or ‘property that truth is for a sentence’. Such terminology invites a moderate pluralist interpretation. Instead, I’ll maintain the less elegant but more explicit vocabulary of “properties ‘true’ designates” and “the designation of ‘true’.”[[10]](#footnote-10)

Monism, as I’ll use the term, is the view that ‘true’ designates one and only one property. Monism encompasses both traditional monism and moderate pluralism. Either sort of monism is compatible with a complex or recursive analysis of ‘true’. For example, the following is a traditionally monist correspondence theory that analyzes ‘true’ recursively:

A sentence, S, is true if and only if:

(A) S is atomic and S corresponds to a fact, or

(B) S is a conjunction whose conjuncts are all true, or

(C) S is a disjunction with at least one true disjunct, or

(D) S is the negation of a sentence S\* that is not true.[[11]](#footnote-11)

While (A)–(D) mark out four different properties, there is no need to suppose ‘true’ designates sometimes one and sometimes another of them. Instead, monists will interpret (A)–(D) as marking out the extension of *truth* and, perhaps, highlighting some important relations that obtain among its members. The mere recursiveness or complexity of a predicate’s analysis is no reason to suppose it designates several different properties. Compare this analysis of ‘ancestor’:

X is an ancestor of Y if and only if:

(i) X is a parent of Y, or

(ii) X is an ancestor of an ancestor of Y.

We don’t suppose ‘ancestor’ designates a different relation when applied to my parents from what it designates when applied to my great-grandparents. There is just one “ancestor” relation, which happens to have a recursive analysis with multiple clauses. The clauses illuminate the fact that *ancestry* is a certain kind of closure of the relation of *parenthood*. Likewise, we can see (A)–(D) as illuminating the fact that *truth’s* extension has a certain structure. It is closed under conjunction of members with each other and under disjunction of members with any other sentences, and it includes atomic sentences that correspond to facts as well as the negations of all sentences it doesn’t include.

The foregoing point about recursion might seem too obvious to be worth spelling out, but Gamester appears to deny it. He asserts that, because *conjoining two sentences that correspond to facts* is a different property from *corresponding to a fact*, recursive characterizations of truth are automatically pluralistic (pp. 39-40). By parallel reasoning though, we should conclude that ‘ancestor’ designates several different relations because *being a parent of Y* is not the same property as *being an ancestor of an ancestor of Y.* But there is something my father has in common with all of my mother’s ancestors. They are my ancestors. While *corresponding to a fact* and *conjoining two sentences that correspond to facts* are certainly two different properties, that doesn’t mean there is nothing ‘Tabby is a cat’ and ‘Tabby is a beautiful cat’ have in common for ‘true’ to designate. They are both true.[[12]](#footnote-12)

Plausible monist theories will account for the truth of lo*g*ically simple sentences. They will then show how the distribution of *truth* among such sentences determines its distribution among the logically complex ones. These views analyze *truth* as a property some things possess by virtue some other things’ possessing it. In that respect, truth is like ancestry. Such analyses of truth have been popular among monists since at least Wittgenstein’s *Tractatus* (1990). In a footnote, Gamester mentions them and says, “there is remarkably little discussion of the resultant disunified metaphysics of truth” (p. 40, n. 9). I suggest there is nothing remarkable about it, for there is no such “resultant disunified metaphysics.” Recursive analyses are not automatically disunified or strongly pluralistic.

A monist who accepts the correspondence theory above, then, would consider (A)–(D) to be pieces of the analysis of a single property. Atomic sentences have it by corresponding to facts. Conjunctions have it by having true conjuncts. But definitional complexity is not metaphysical pluralism.[[13]](#footnote-13) A more sophisticated monist theory (such as that of (Field, 1972)) can even be framed so as to explain why conjunctions are true whenever their conjuncts are.[[14]](#footnote-14)

The appearance of a “disunified metaphysics” might arise from an intuition along these lines: Complex or recursive analyses of *F* describe multiple *ways of being F*, and surely that means *F*-ness actually consists in a plurality of other properties. Even if sound, such an intuition doesn’t support strong pluralism. At most, it supports the *moderate* pluralist idea that *F*-ness is a property whose instantiation comes by way of instantiating one or another property corresponding to a clause in the analysis. Such a view is *monistic* about *F*-ness and pluralistic only about its metaphysical grounds. But without further reason to think ‘*F*’ designates those grounds, rather than the superordinate property they ground, the supposition that there is more than one way to be *F* is not a strong pluralist supposition.[[15]](#footnote-15)

Gamester presents his theory in the context of arguing that logically complex sentences don’t *mandate* a monistic theory of truth, and he characterizes monism as the view that “truth always consist[s] in the same thing, no matter which sentence you consider” (p. 35). But “the same thing” could be something complex, and it could be something analyzed recursively. “Consisting” could be a matter of numerical identity or of realization, grounding, or constitution. He may mean by “monism” the view that *truth* is (or is realized or grounded in) a single property whose analysis is not recursive or disjunctive in any way. In that case, though, what he describes as the “received view” would be a straw person; it is not the received view that logically complex sentences require a non-recursive, non-disjunctive analysis of truth as (grounded in) a single property. The idea that true conjunctions must be true in the same way as their conjuncts, for example, should not be understood as ruling out “ways” that are specified recursively. The monist strategy for logically complex sentences is to use devices such as recursion to show how the distribution of *truth* among complex sentences is determined by its distribution among simple ones.

## 3. Gamester's Theory

Suppose, with strong pluralism, that ‘true’ designates correspondence for ‘Tabby is a cat' and coherence for ‘Tabby is beautiful’.[[16]](#footnote-16) What does it designate for ‘Tabby is a beautiful cat’? Neither correspondence nor coherence is a good candidate. But, if ‘true’ designates some third property, why not suppose it’s a more generic property, perhaps recursively specified, that ’Tabby is a beautiful cat’, ‘Tabby is beautiful’, and ‘Tabby is a cat’ all have in common? That’s the crux of the problem of mixed compounds (Tappolet, 1997).

Gamester rightly points out that this is a problem only if we combine strong pluralism with the assumption that ‘true’ must designate the same property (or properties) for logically complex sentences and their components. He rejects the assumption. On his view, ‘true’ designates different properties for sentences with different logical structures. So, ‘true’ has as many designations as there are logical forms.

Here is Gamester’s theory. Let ﻿﻿ be whatever property is truth for atomic sentences, and define a sentence’s “order” as follows: Atomics are order 0, and the order of a logically complex sentence is one more than the order of its highest-order component. Then for first-order complexes, the theory is:



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The first order consists of conjunctions, negations, disjunctions, and conditionals of order-0 sentences (i.e., atoms). Beyond the first order, the theory becomes much more complicated. It includes clauses for every possible logical form:[[17]](#footnote-17)

[We need] theories to cover sentences of arbitrary form and complexity. Fortunately, we have a straightforward recipe for any truth-functional complex. Any complex will ultimately be composed of atomic sentences. As such, for any sentence, the right-hand side of the relevant definitional biconditional will be of the same logical form as the sentence itself, but attributing *T*A ﻿ to its atomic components. (Gamester, 2019, 40.).

As an example, Gamester defines ﻿﻿, the designation of ‘true’ for sentences of the form:



The definition is:

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Gamester’s theory is meant to be pluralist. We should not see its clauses as components of a very complicated or recursive monistic analysis of *truth.* It isn’t meant to identify *truth* as the first-order property whose extension the analysis demarcates. Nor does it identify *truth* with a higher-order property sentences have by virtue of satisfying some clause of the analysis or other.[[18]](#footnote-18) Those would be monist views. Rather, Gamester defines an infinite collection of distinct properties, one corresponding to each possible logical form. ‘True’, as applied to a sentence with a given form, designates whatever property the theory defines for that form. For example, when applied to a disjunction of atoms, ‘true’ designates ﻿﻿. It doesn’t designate a first-order property true disjunctions share with true atoms, nor a higher-order property they have by virtue of possessing ﻿﻿.

## 4. The Three Shortcomings

### Shortcoming #1: The Monist Advantage

Even if Gamester’s theory is extensionally adequate,[[19]](#footnote-19) its formulation allows a monistic reading. Monists need not deny there are distinct properties answering to each clause of the theory, just as no one is committed to denying that *being the father of one of my ancestors* is a different property from *being my mother*. The distinctness of those latter properties doesn’t mean there isn’t also the property of *being one of my ancestors*, and the distinctness of properties such as  and ﻿﻿ doesn’t mean there isn’t also the property *truth.* The intended, pluralist interpretation of Gamester’s theory puts it at an explanatory disadvantage compared to monistic theories.

The only way to state Gamester’s theory finitely is indirect, through structural descriptions of its infinitely many analyses of infinitely many properties ‘true’ can designate. In that respect it resembles Paul Horwich’s (1998) “Minimal Theory” of truth, whose axioms are just the instances of the schema ‘The proposition *that p* is true if and only if *p*’, where ‘*p*’ is replaced by sentences of a certain class. Instead of stating a definition of ‘true’, Horwich and Gamester give recipes for generating infinitely many partial definitions. The totality of those partial definitions is supposed to constitute the full definition of ‘true’.[[20]](#footnote-20) As Horwich’s critics have pointed out,[[21]](#footnote-21) without appeal to an over-arching property of *truth*, part of whose extension each clause demarcates, the full definition is just an arbitrary and disjointed collection of rules for applying ‘true’.[[22]](#footnote-22) Consider two true conjunctions, ‘*p* & *q*’ and ‘*~r* & ~*s*’. How should we explain their truth? A Horwich style minimalist would give explanations such as these:

‘*p* & *q*’ is true because (a) ‘*p* & *q*’ is true if and only if *p* and *q*, and (b) *p*, and (c) *q*.

'*~r* & *~s*’ is true because (a) ’*~r* & *~s*’ is true if and only if *~r* and ~*s*, (b) *~r*, and (c) *~s*.

The minimal theory has no unified explanation on which both conjunctions are true for the same reason — their shared property of *having only true conjuncts*. The theory is too weak even to imply the generalization, ‘All conjunctions with only true conjuncts are true’.

The Gamester-style pluralist is in the same boat. As a conjunction of atoms, ‘*p* & *q*’ is of order 1. ‘True’ designates  (defined above) when applied to it. But ‘~*r* & ~*s*’ is a conjunction of negations of atoms. Its order is 2. ‘True’ designates a different property when applied to it. That property, which we can call ‘’, is defined by:[[23]](#footnote-23)

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On Gamester’s theory, we would explain the truth of ‘*p* & *q*’ and ‘~*r* & ~*s*’ as follows:

‘*p* & *q*’ is true because (a) ‘true’ applied to ‘*p* & *q*’ designates *T*&1, (b) ‘*p* & *q*’ is *T*&1 if and only if ‘*p*’ is *T*A and ‘*q*’ is *T*A, and (c) ‘*p*’ is *T*A and ‘*q*’ is *T*A.

‘~*r* & *~s*’ is true because (a) ‘true’ applied to ‘~*r* & *~s*’ designates *T*&2~1~1, (b) ‘~*r* & ~*s*’ is *T*&2~1~1 if and only if ‘*r*’ is not *TA* and ‘*s*’ is not *T*A, and (c) ‘*r*’ is not *TA* and ‘*s*’ is not *T*A.[[24]](#footnote-24)

The theory has no unified explanation that represents the conjunctions as true for the same reason — by virtue of *having true conjuncts*. On Gamester’s theory, “having true conjuncts” is not a single property at all. Instead, ‘has true conjuncts’ designates different properties for conjunctions of different logical microstructures. If we were to say that ‘*p* & *q*’ and ‘~*r* & *~s*’ both have true conjuncts, we wouldn’t be pointing to a similarity between them. We’d be attributing *TA* to the conjuncts of ‘*p* & *q*’ and *T*~1 to the conjuncts of ‘~*r* & ~*s*’.

 In contrast, a monist theory could provide explanations such as these:

‘*p* & *q*’ is true because (a) conjunctions have the property of *truth* if and only if all their conjuncts do, and (b) ‘*p* & *q*’ is a conjunction whose conjuncts all possess *truth.*

‘*~r* & *~s*’ is true because (a) conjunctions have the property of *truth* if and only if all their conjuncts do, and (b) ‘~*r* & ~*s*’ is a conjunction whose conjuncts all possess *truth.*

These explanations *do* represent the two conjunctions as true for the same reason. Each is true because it is a conjunction whose conjuncts are all true*.* The monist explanation points to what the conjunctions have in common. A Gamester-style pluralist might be able to say something like ‘Both conjunctions are true because they have true conjuncts’, but since ‘true’ and ‘has true conjuncts’ designate different properties for different logical forms, but it would not be indicating anything the conjunctions have in common or representing them as true for the same reason. Given that it’s desirable to make sense of how all true conjunctions are true for the same reason, the monist has an explanatory advantage over Gamester-style pluralism.[[25]](#footnote-25)

### Shortcoming #2: Syntactic Constraints and Logical Form

A second shortcoming arises from Gamester’s recipe for generating clauses of the theory: “for any sentence [of the object language], the right-hand side of the relevant definitional biconditional [in the metalanguage] will be of the same logical form as the [object language] sentence itself, but attributing ﻿﻿ to its atomic components” (Gamester, 2019, 41.).

This puts an unmotivated syntactic constraint on the metalanguage in which truth is analyzed: The metalanguage must include sentences with the same microstructure as each sentence in the object language. So, the metalanguage in which we state a truth theory for a given object language *O* has to include all the primitive connectives that *O* does.

Let *O* be a language whose only truth-functional connective is ‘|’, defined via truth-table so that ‘(*p* | *q*)’ has the truth-value “true” if and only if at most one of ‘*p*’, *‘q*’ has that truth-value. *O* is truth-functionally complete in the sense it can express every truth-function. Now let *M1* be a metalanguage whose only connectives are ‘&’ and ‘~’, for classical conjunction and negation, and let *M2* be a metalanguage whose only connectives are ‘﻿﻿’ and ‘~’, for the material conditional and negation. *M1* and *M2* are truth-functionally complete as well.

Strictly speaking, there is no way in *M1* or *M2* to give a Gamester-style definition of truth for ‘(*p* | (*q | q*))’. Since ‘|’ isn’t in either metalanguage, they have no sentences with the same form as ‘(*p* | (*q | q*))’. But shouldn’t we be able to say, in *M1*, that ‘(*p* | (*q* | *q*))’ is true if and only if ~(*p* & ~*q*)? And shouldn’t we be able to say, in *M2*, that it is true if and only if ﻿﻿?

The obvious response is to stipulate a way of translating complex object-language sentences into the metalanguage. Then, so far as *M1* is concerned, the logical form of ‘(*p* | (*q* | *q*))’ might be ‘~(*p* & ~*q*)’, and so far as *M2* is concerned, it might be ‘﻿﻿’. Such an approach yields the third shortcoming of Gamester’s proposal.

*Shortcoming #3: The Indeterminacy of Logical Form*

There is no principled reason for *M1* to translate ‘(*p* | (*q* | *q*))’ as ‘~(*p* & ~*q*)’ instead of something else truth-functionally equivalent to it, such as ‘~(*p* & ~(*q* & *q*))’ or ‘~(*p* & ~*q*) & ~(*r* & *~r*)’. Nor is there a principled reason for the canonical translation in *M2* to be ‘﻿﻿’ rather than ‘﻿﻿’. Each translation has a different logical form, and so the truth-property relevant to each is different. The translations have different “orders” of Gamester’s hierarchy. For example, the “order” of ‘﻿﻿’, a conditional of two atoms, is 1. As applied to ‘﻿﻿’, ‘true’ designates ﻿﻿. But the “order” of ‘﻿﻿’ is 2, for it is a conditional whose components are each of order 1. ﻿﻿ is a property of conditionals of atoms. It is undefined for conditionals whose antecedent is a negation of one atom and whose consequent is the negation of another. On Gamester’s way of describing orders, ‘(*p* | (*q* | *q*))’ is order 2, but no order 2 sentence in *M1* is truth-functionally equivalent to it. Its shortest equivalent is the order 3 sentence, ‘~(*p* & ~*q*)’.

Let *M3* be a language with ‘~’, ‘&’, and ‘’ as its connectives. *M3* contains all the sentences of *M1* and *M2*, as well as sentences employing both ‘&’ and ‘’. The sentence ‘(*p* | (*q* | *q*))’ is translatable into *M3* in any of the five ways mentioned above, as ‘’, and in many other ways. Even if we had a good reason to prefer one translation into *M1* and another translation into *M2*, we’re left with an arbitrary choice of how to translate it into *M3.*

Each of a sentence’s translations into a metalanguage nominates a different property for ‘true’ to designate. An arbitrary choice of translation scheme would then make the designation of ‘true’ arbitrary as applied to a given sentence of *O*. To avoid arbitrariness, a defender of Gamester’s theory has three clear options. One is to insist that ‘true’ can’t be analyzed except in a metalanguage with the same primitive connectives as the object language. Such a restriction is artificial and otherwise unmotivated.

A second option is to say that ‘true’, as applied to a sentence of *O*, designates every property nominated by any way of translating the sentence into the metalanguage. The properties exist whether or not ‘true’ designates them, so this option isn’t ontologically extravagant. But it is semantically extravagant. Why suppose ‘true’, when applied to a given sentence, designates infinitely many distinct properties, rather than just supposing ‘true’ designates *truth*?

The third option is to treat all truth-functionally equivalent truth-definitions as picking out the same property by different routes. We might be able to frame multiple truth-definitions for ‘(*p* | (*q* | *q*))’, depending on our choice of metalanguage and translation scheme. All their right-hand sides share an important feature: They express a single function[[26]](#footnote-26) from the possible truth-values of ‘*p*’ and ‘*q*’ to resulting truth-values of the complex sentence. This approach is less attractive than it might first appear. Consider just ‘﻿﻿’, for which ‘true’ designates ﻿﻿, and its truth-functional equivalents, ‘﻿﻿’ and ‘﻿﻿’. On this approach, ‘true’ for all three would designate the same property, presumably ﻿﻿. It is, at the very least, out of the spirit of the Gamester’s proposal for ‘true’ to designate one and the same property for an atom, a conjunction, and a disjunction.

There is another problem. The designation of ‘true’ remains indeterminate on this approach. Observe that ‘﻿﻿’ is both a disjunction of an atom with itself and a disjunction of two atoms. So, there are two candidate truth-definitions for it:

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and

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﻿﻿ and ﻿﻿ aren’t the same property; they have different extensions. Should we identify “the” logical form of ‘﻿﻿’ as that of a disjunction of an atom with itself or merely as a first-order disjunction? We need not decide unless we assume the designation of ‘true’ varies with the logical form of what it’s applied to. Gamester’s theory presupposes there is such a thing as “the” logical form of a sentence, but “the” logical form of a sentence is often an arbitrary choice from among multiple, equally good candidates.[[27]](#footnote-27)

## 5. Conclusion

To solve the problem of mixed compounds, pluralists need to show how the truth of some sentences can be grounded in the truth of others, without supposing ‘true’ designates the same property for all sentences. Gamester’s theory is intended to do that. His challenge to monists was to identify shortcomings of the theory in virtue of its pluralism.

This paper has met Gamester’s challenge by identifying three such shortcomings. (1) On its pluralist interpretation, the theory fails to account for what true conjunctions have in common *with each other*, even apart from anything they might have in common with their conjuncts. (2) The theory puts an unmotivated syntactic constraint on the metalanguage in which a theory of truth is stated. (3) Avoiding Shortcoming #2 requires arbitrary choices among candidate designations for ‘true’ as applied to a given sentence, because there is indeterminacy in what “the” logical form of a sentence is.

Monistic theories, be they traditional monist theories or moderate pluralist ones, don’t face these challenges. They can exploit the existence of *truth* as a singular property all conjunctions (for example) have in common with one another (and, as it happens, with their conjuncts). They can be formulated in a metalanguage that doesn’t include the object language’s connectives. And they can make sense of truth-functionally equivalent statements of truth-conditions for object-language sentences simply as different ways of saying what it takes for those sentences to possess *truth*.

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1. See Wright (2013) for a survey of the logical space of alethic pluralisms. Strong alethic pluralism corresponds to Wright’s “Mode C” pluralism. Moderate alethic pluralism corresponds to “Mode D.” [↑](#footnote-ref-1)
2. There is room for variation in what “designation” amounts to. As Wright (2013) points out, plausible forms of strong pluralism are unlikely to construe ‘true’ as ambiguous or polysemous. More plausible views would hold that ‘true’ expresses a single, unified concept, but that concept marks out a variety of distinct properties rather than a single (perhaps multiply realizable) one. [↑](#footnote-ref-2)
3. Kim and Pedersen (2018) make a similar proposal. Their proposal avoids the first two shortcomings of Gamester’s described in this paper. It does not avoid the third. [↑](#footnote-ref-3)
4. These are families of *inflationist* theories of truth. I will not consider deflationist approaches here, except to point to a problem Gamester’s theory shares with Paul Horwich’s influential version of deflationism. [↑](#footnote-ref-4)
5. The application of these slogans for the positions is due to (Lynch, 2009). [↑](#footnote-ref-5)
6. Another moderate pluralist view would hold that *truth* is a higher-*level* property with multiple sorts of lower-level grounds or determiners, rather than construing it as the higher-*order* property of having a property of a certain sort. Edwards (2018) formulates his version of moderate pluralism in terms of “determination.” [↑](#footnote-ref-6)
7. The most influential articulation of moderate pluralism is Michael Lynch’s *Truth as One and Many* (2009). Douglas Edwards articulates a metaphysically sophisticated moderate pluralism in *The Metaphysics of Truth* (2018). [↑](#footnote-ref-7)
8. Writing in terms of propositions and properties, rather than sentences and predicates, Kim and Pedersen (2018, p. 108-9) define strong pluralism as this view: There is a plurality of properties *T*1, …, *T*n such that (i) for every proposition Φ, Φ’s being true is identical to Φ’s being *T*i (1 ≤ I ≤ n) and (ii) there is no property among *T*1, …, *T*n that satisfies (i) for every Φ. [↑](#footnote-ref-8)
9. Strong and moderate pluralism should be distinguished from what we might call “pluralist relativism,” the view that nothing is true independently of a perspective and that the same claim is sometimes true from one legitimate perspective and not true from another. [↑](#footnote-ref-9)
10. Numerical identity is transitive. So, if truth is numerically identical to *F* for some sentences and *G* for others (as a loosely-speaking strong pluralist might assert), then *F* and *G* would have to be numerically identical as well (*contra* strong pluralism). [↑](#footnote-ref-10)
11. ‘Conjunction’, ‘disjunction’, and ‘negation’ here are to be understood in their truth-functional senses. The theory described above is obviously incomplete. It has nothing to say about quantificational structure or non-logical complexity. For the purposes of this paper, though, a more complete theory would introduce unnecessary complications. Like Gamester, I focus “logical complexity” as a matter of a sentence’s employing truth-functional connectives. [↑](#footnote-ref-11)
12. Readers who have not met Tabby will have to take my word for it. He *is* a beautiful cat. [↑](#footnote-ref-12)
13. The analysis of ‘true’ above allows for traditional monist, moderate pluralist, or strong pluralist readings. On the traditional monist reading, it is a complex analysis of a single first-order property. A moderate pluralist could see it that way or as identifying four different realizer properties for the superordinate property *truth*. The strong pluralist reading would see it as identifying four properties ‘true’ designates. But the strong pluralist reading (which denies the existence of *truth* and posits multiple distinct designations for ‘true’) is not mandatory. [↑](#footnote-ref-13)
14. A theory such as Field’s, modeled on Tarski’s, can identify *truth* with satisfaction by all sequences. A conjunction is satisfied by a sequence iff its conjuncts are satisfied by it. So, a conjunction is satisfied by *all* sequences iff its conjuncts are (i.e., if they are true). [↑](#footnote-ref-14)
15. Gamester doesn’t distinguish strong from moderate pluralism, and he sometimes writes as though he has moderate pluralism in mind. For example, he presents his theory as saying “what truth consists in” for different logical forms (see Gamester 2019, p. 35). But, as pointed out above, moderate pluralism a version of monism about what ‘true’ designates, and so it doesn’t face the problem Gamester’s theory is meant to address: Making sense of truth-functionally complex sentences without the assumption that all true sentences have the property *truth* in common. [↑](#footnote-ref-15)
16. Strong pluralism as such isn’t committed to particular views about which properties ‘true’ designates for which kinds of sentences. I use the example of Tabby’s being a beautiful cat as a stand-in for any conjunction of claims for which ‘true’ designates two different properties. [↑](#footnote-ref-16)
17. Gamester is concerned with “logical form” as it is reflected in a sentence’s truth-functional syntax, and the only kind of logical complexity he addresses is complexity that arises from the usage of truth-functional connectives to build new sentences out of old ones. I will confine my attention to such complexity as well, except to note that the resulting theories are forced to treat non-truth-functionally complex sentences as atoms. ‘Jack fell down and [then] broke his crown’, for example, would be atomic, not a conjunction. [↑](#footnote-ref-17)
18. Recall that moderate pluralist theories *already* avoid the problem of mixed compounds by holding that ‘true’ always designates *truth*, and *truth* is realized in complex sentences as a function of its being realized in simple ones. For there to be any problem Gamester’s theory solves, we have to see it as a strongly pluralist theory. [↑](#footnote-ref-18)
19. As it is entirely unclear how to extend the theory to incorporate first-order quantification, it is not extensionally adequate as it stands. Yu (2017) gives an account of first-order logic for alethic pluralists, but it is better seen as pluralism about *satisfaction* than truth, and it is friendly to the existence of a *truth* as a single generic property shared by all true sentences, whatever their form or subject matter. [↑](#footnote-ref-19)
20. Suppose fully grasping the concept TRUE requires grasping the definition of ‘true’. As Anil Gupta (1993) points out, it would then follow that the Minimal Theory makes TRUE impossible to grasp. Its definition includes clauses for propositions one can’t entertain, either for lack of the relevant concepts or due to one’s cognitive limits. Gamester’s theory has a similar problem, since it includes clauses for logical microstructures too complex for one to grasp. [↑](#footnote-ref-20)
21. See, for example Gupta (1993, 2010). [↑](#footnote-ref-21)
22. An important point of difference is that Horwich construes of ‘true’ as designating a single (but insubstantial) property, partially defined by each clause of the theory. Gamester thinks of each clause as fully defining a property ‘true’ designates when applied to sentences of a given form. [↑](#footnote-ref-22)
23. It isn’t clear whether this definition defines the same property as a similar one defined for atomic sentences ‘*p*’ and ‘*q*’. That’s because it isn’t clear whether Gamester’s theory can deliver the needed laws of substitution to turn a definition of truth for ‘~*p* & ~*q*’ into a definition for ‘~*r* & ~*s*’. The theory on its intended interpretation does not support a law allowing for the designation of ‘true’ to remain the same under uniform substitution of sentences for atoms; if it did, there would be no need for any clauses beyond order 1. Whether the theory keeps the designation of ‘true’ constant under uniform substitution of *atoms* for atoms depends on what we take ‘true’ to designate for ‘*p* & *p*’. Candidate properties include: , , or some other property unique to conjunctions of atoms with themselves. [↑](#footnote-ref-23)
24. Alternatively, (c) could be framed, “’~*r’* is *T*~1 and ‘~*s*’ is *T*~1.” Such a rephrasing would be no help to Gamester, though, because *TA* and *T*~1 are different properties, and so *having TA conjuncts* and *having T~1 conjuncts* are different properties as well. Because they’re different properties, the two explanations still don’t represent the conjunctions as true for the same reason. [↑](#footnote-ref-24)
25. Not all versions of strong pluralism have this problem. For example, on the strong pluralism of Kim and Pedersen (2018) the designation of ‘true’ varies with the *top-level* logical forms of propositions, rather than microstructure. So, ‘true’ designates the same property for all conjunctions, no matter their substructure — namely, the property of being a conjunction whose conjuncts have the property ‘true’ designates as applied to them. Likewise, not all monist theories avoid it. For example, there could be a (terrible) monistic theory on which only atomic sentences are true. Such a theory denies there are any true conjunctions, so it clearly can’t explain why any conjunctions are true. [↑](#footnote-ref-25)
26. But only extensionally! ‘’ and ‘  ’ are intensionally distinct. [↑](#footnote-ref-26)
27. Kim and Pedersen’s (2018) similar approach avoids Shortcomings #1 and #2 by positing different designations for ‘true’ based on the top-level logical structure of propositions (rather than the microstructure of sentences). It does suffer a version of Shortcoming #3, though, for it presupposes a metaphysical fact of the matter about the logical structure of propositions. Is the proposition <If you pay, I’ll quit> really a primitive material conditional, a negation of <You pay and I won’t quit>, or the disjunction <You don’t pay or I’ll quit>? What about <5 is an even number>? Is that atomic, or is it the negation of <5 is an odd number>? Note that these are questions one need not answer if the designation of ‘true’ doesn’t vary with logical form. [↑](#footnote-ref-27)