

Nietzsche On Identity

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ABSTRACT: I gather and constructively criticize Nietzsche's writings on identity. Nietzsche treats identity as a logical fiction. He denies that there are any enduring things (no substances); he denies that there are any indiscernible things in any respect (no universals, no bare particulars). For Nietzsche, the world consists of durationless events bearing non-universal properties and standing to one another in non-universal relations. Events are bundles of tropes. Nietzsche even denies self-identity. His events are self-differing trope-bundles. I link Nietzsche's denial of self-identity with modern treatments of paradox.

1. Introduction

1.1 Examining Nietzsche's Theory of Identity

Nietzsche takes a strikingly skeptical view of identity.¹ We are all too familiar, he thinks, with metaphysical and logical theories that carelessly affirm identity everywhere. To avoid what he thinks are the deleterious consequences of such metaphysical and logical theories, Nietzsche strenuously denies that there is any identity anywhere. Nietzsche is not the only thinker to challenge the logical supremacy of identity. His denials of identity as equality and identity as endurance link him closely to modern ontologies involving tropes (rather than universals) and events (rather than substances).

I aim to work out the logic of Nietzsche's world without identity. Strikingly, his remarks on identity are often qualified by phrases like "in reality", "in fact", and "in truth". I take it that remarks so qualified apply to the world as will to power (BGE² 22, 36; GM II:12; WP 1067).³ I have gathered Nietzsche's texts on identity,⁴ and sorted them into categories according to contemporary logical work on identity. I provide close analytic and critical commentary on these texts. While I try to stay very close to Nietzsche's writings, I do not hesitate to fill in the conceptual gaps he sometimes leaves. My criticism is constructive. I also try to follow the implications of his theory of identity using techniques from modern logic and mathematics. My present account aims to provide premises for further work on the role of identity both in Nietzsche's system⁵ and in logic generally. Much work remains to be done in this area.⁶ Nietzsche's theory of identity points toward a profoundly non-Aristotelian logic and metaphysics. Nietzsche argues that the higher emerges from the lower: altruism emerges out of egoism, truth emerges out of error, logic emerges from illogic (HH 1; GS 111; BGE 2; TI 3:4-6). Just so, identity emerges out of difference. Of course, the identity that does emerge from difference is merely apparent.

1.2 Many Senses of Identity

Identity is a subtle and logically challenging relation.⁷ There are many senses of identity.⁸ Nietzsche will deny the reality of almost all of them, claiming that "unity, identity, duration, substance, cause, materiality, being" are errors (TI 3:5). Here I provide a brief taxonomy of identity relations; other taxonomies are possible. I do not offer this taxonomy dogmatically; I offer it only to use it as a tool to clarify Nietzsche's concepts.

Among the many senses of identity, two are primary: (1) *identity as endurance*, and (2) *identity as equality*. There is a difference. Suppose you and I are playing a chess game. A friend present at the start may come back later, see us playing some chess game in its end stages, and ask whether we are playing *the same* game. We might be playing the same game in the sense that (1) we are *continuing* our play (we didn't start a new game), or in the sense that (2) we are *repeating* our play (we wrote down the moves, and we are replaying the game). The first sense is endurance; the second is equality.

Identity as endurance is identity through time. It is also known as diachronic identity, more rarely as genidentity. It always involves temporal difference. Endurance has two main logical forms. First: *x at time t_1 is the same as y at time t_2* , where t_1 and t_2 are different times. For example: the man who was Governor of Arkansas in 1980 is the same as the man who is President in 1999. Second: *x at t_1 is the same F as y at t_2* , where F denotes some type or sort of thing. For example: the girl in that picture is the same person as the woman I married. Because the term F specifies some *sort* of thing, it is known as a *sortal* term. The sortal F restricts the comparison to things that are F's: x at t_1 is an F, y at t_2 is an F, and x at t_1 is one and the same as y at t_2 . While the logical detail may be tiresome, the restriction to F's is important. For instance, since the material in our bodies is always being replaced, it might be true that you are the same person and the same organism as you were 10 years ago, but you are not the same material thing as you were 10 years ago.

Identity as equality differs from identity as endurance because time is not at issue. Either the identified objects are simultaneous or timeless. Identity as equality is indiscernibility. Equality comes in three main logical forms: (1) x is one and the same as y; (2) x is one and the same F as y; (3) x is the same F as y. The first expresses the absolute numerical identity of x and y: x is y. In traditional logic, each thing is one and the same as itself: Socrates is one and the same as Socrates. The second form is numerical-identity relative to the sortal term F. So: Cicero is one and the same man as Tully, the Morning Star is one and the same star as the Evening Star. Again, the sortal restricts the comparison to things that are F's: x is one and the same F as y means that x is an F, y is an F, and x is one and the same as y. So: Cicero is not one and the same man as the Morning Star. Finally, the third form is type-identity. It is also sortal-relative, since you have to specify the type or sort involved. If you hold a copy of Plato's *Republic* in your left hand, and another copy in your right hand, then the book in your right hand is the same book as the book in your left hand, but it is not one and the same book as the book in your left hand. This is the distinction between types and tokens. For example, "hello" and "hello" are two word-tokens of one word-type; so, "hello" is the same word as "hello", but "hello" is

not one and the same word as "hello". The two words are type-identical, but not token-identical.

2. Nietzsche on Types and Tokens

2.1 The World of Identical Cases

When Nietzsche talks about identity, he often talks about "identical cases" (WP 512, 521, 532, 544, 551, 568, 569). He says we live in a "world of identical cases" (WP 521). Identical cases are different tokens of some one type. High-level cognitive operations, such as judgment, logical and mathematical reasoning, and linguistic communication, presuppose identical cases. These operations presuppose that the mind experiences things as tokens of types, as instances of concepts. Judgment is the mental act of binding particulars to universals (that is, to concepts); it is the act of classifying: "Judgment -- this is the belief: 'This and that are so.' Thus there is in every judgment the avowal of having encountered an 'identical case'" (WP 532). The belief 'This and that are so' brings the individuals x and y under a common concept F : this (x) and that (y) are F , that is, $F(x)$ and $F(y)$. It is the recognition that the particulars x and y are tokens of type F . The recognition of identical cases is necessary for linguistic communication, since language applies one word to many things: "for there to be communication something has to be firm, simplified, capable of precision (above all in the *identical* case)" (WP 569). For instance: the word "man" is applied to Socrates and to Plato; if we say: "Socrates is a man" and "Plato is a man", we are saying that the particulars Socrates and Plato are tokens of the type "man". They are identical cases. Since logic uses the subject-predicate schema taken from ordinary language, "logic is bound to the condition: assume there are identical cases" (WP 512). Likewise, mathematics presupposes identical cases: "The *calculability of an event . . . resides in the recurrence of 'identical cases'*" (WP 551). It presupposes them for counting. To count the number of apples in a box is to count the number of tokens of the type apple. Likewise for measurement operations: weighing is counting the number (say) of grams of something, surveying is counting the number (say) of meters from here to there. In each case, what is counted or measured is tokens of the type gram or type meter.

Identical cases (tokens of types) are fabricated for higher-level cognitive operations by lower-level cognitive processes, such as perception.⁹ The world of identical cases is the phenomenal world of human subjective experience: "the world of 'phenomena' is the adapted world which we feel to be real. The 'reality' lies in the continual recurrence of identical, familiar, related things in their logicized character" (WP 569). Nietzsche thinks that tokens of types are constructed by comparisons within perception: "in a world where there is no being, a certain calculable world of identical cases must first be created through appearances: a tempo at which observation and comparison are possible" (WP 568). Things do not naturally fall under types; they do not naturally come to us as tokens of type: the unconscious mind classifies things for us, so that we consciously experience every individual x as an instance (token) of some concept (type) F . Nietzsche says: "Before there is 'thought' there must have been 'invention'; the construction of identical

cases, of the appearance of sameness, is more primitive than the knowledge of sameness" (WP 544); "There would be nothing that could be called knowledge if thought did not first re-form the world in this way into 'things', into what is self-identical" (WP 574; cf. WP 516). Again: "All knowledge which is of assistance to us involves the *identification of things which are not the same*, of things which are only similar" (PT, p. 51; Nietzsche's italics).

2.2 The World Of Identical Cases Is Fictitious

The existence of identical cases is merely apparent: "The principle of identity has behind it the 'apparent fact' of things that are the same" (WP 520). The apparent fact that things are the same is justified by "the utilitarian fact that only when we see things coarsely and made equal do they become calculable and usable to us" (WP 515). The pragmatic value of identity is ultimately biological: "Life is founded upon the premise of a belief in enduring and regularly recurring things" (WP 552). Those animals "who did not know how to find often enough what is 'equal' as regards both nourishment and hostile animals . . . were favored with a lesser probability of survival than those who guessed immediately upon encountering similar instances that they must be equal" (GS 111).

The existence of identical cases is not just an apparent fact; worse, it is sheer fiction: "Logic is bound to the condition: assume there are identical cases. In fact, to make possible logical thinking and inferences, this condition must first be treated fictitiously as fulfilled. That is: the will to logical truth can be carried through only after a fundamental falsification of all events is assumed" (WP 512). If that is correct, then there are no identical cases in the world as will to power: there are no tokens of types. Organisms like us, with minds like ours, regularize our experience to produce the fictions of identical things: "It is we who created the 'thing,' the 'identical thing,' subject, attribute, activity, object, substance, form, after we had long pursued the process of making identical, coarse and simple. The world seems logical to us because we have made it logical" (WP 521). While Kant tried to argue that "The basic laws of logic, the law of identity and the law of contradiction, are forms of pure knowledge"; Nietzsche instead asserts that "these are not forms of knowledge at all! they are regulative articles of belief" (WP 530).

2.3 The Fabrication of Identical Cases

The cognitive mechanisms that produce identity produce both identity as endurance and identity as equality. Endurance and equality are illusions produced when the mind associates a new perception with a merely similar old memory. Different phenomenal tokens are made into identical cases, that is, into tokens of the same conceptual type, by the fusion of memory with perception: I remember that x and I perceive that y, because x is similar to y, I identify x with y; since y is past and x is present, I conclude that there is some one thing (a substance) that has endured from the time I perceived y to the time I perceive x. As the mind receives new sensory inputs, it sorts them into categories it has already formed: "In our thought, the essential feature is fitting new material into old schemas. . . *making equal what is new*" (WP 499); "there is in every judgment the avowal of having encountered an 'identical case': it therefore presupposes comparison with the

aid of memory" (WP 532). The man engaged in moral reflection "experiences psychological pleasure or displeasure through comparing his present states with past ones and declaring them identical or not identical (as happens in all recollection)" (WS 12). Many individuals are subsumed under one species (under one concept) due to the similarity of their forms. The form is an equality that endures: "The form counts as something enduring . . . but the form has merely been invented by us; and however often 'the same form is attained,' it does not mean that it is the same form -- what appears is always something new, and it is only we, who are always comparing, who include the new, to the extent that it is similar to the old, in the unity of the 'form.'" (WP 521). The power of the living, thinking organism is its ability to "assimilate the new to the old, to simplify the manifold . . . to file new things in old files" (BGE 230; GS 114). Nietzsche describes two main cognitive mechanisms for the production of identity: (1) feature deletion and (2) feature blurring.

The first cognitive mechanism for the production of identity is *feature deletion*: the less salient or striking features of distinct perceptual experiences are ignored. Feature deletion is central to concept formation: "Every concept arises from the equation of unequal things. Just as it is certain that one leaf is never totally the same as another, so it is certain that the concept 'leaf' is formed by arbitrarily discarding these individual differences and by forgetting the distinguishing aspects. . . . We obtain the concept, as we do the form, by overlooking what is individual" (PT, p. 83). The mind sees a (phenomenal) thing *x* with some set of features. The thing *x* is a "unique and entirely individual original experience" (PT, p. 83). Some of the features of *x* are perceptually striking. For example, suppose that the set of features of *x* is {A, B, C, D, E}, and the set of *striking* features of *x* is {C, D, E}. The mind names *x* with an internal word: "leaf". Some time later, the mind sees another (phenomenal) thing *y* with some set of features. For example, the set of features of *y* is {C, D, E, F, G, H}, and the set of *striking* features of *y* is {C, D, E}. Because the striking features of "leaf" are the same as those of *y*, the (phenomenal) thing *y* is associated with the same internal word "leaf". The word "leaf" has become a concept: it applies to many things. The concept *leaf* is now associated with the striking features common to *x* and to *y*, that is, with the set {C, D, E}. The individual features of the first thing *x* and the second thing *y* are ignored (PT, p. 51). The result is that *x* and *y* become identical cases; they become tokens of the type *leaf*. So: *x* is a leaf, and *y* is a leaf. The essential features of this type are the striking features C, D, and E that *x* and *y* share in common.

The second cognitive mechanism for the production of identity is *feature blurring*. It is a kind of confusion that precedes judgment and subject-predicate cognition. The higher-level processes of judgment depend on the lower-level equalization within perception: "There could be no judgments at all if a kind of equalization were not practiced within sensations" (WP 532). Indeed, many higher-level cognitive processes depend on this equalization: "All thought, judgment, perception, considered as comparison, has as its precondition a '*positing* of equality,' and earlier still a '*making* equal.'" (WP 501). The original equalization practiced by human cognition occurs in sensation: "That weak sensations are regarded as alike, sensed *as being the same*, is the fundamental fact. Thus confusion of two sensations that are close neighbors" (WP 506). The mind blurs similar

sensations into identical sensations: "the coarser organ sees much apparent equality" (WP 511). In his discussion of concept formation by feature deletion, much equalization has already occurred: the phenomenal things already have features that are regularized, logicized. For example, the shapes and colors of the two leaves x and y are already sufficiently blurred that there is no noticeable difference between them. If the features of sensations are blurred into equality, that presupposes that they are not equal. Prior to blurring, all sensory qualities are individual; they are particular qualities. Qualities like redness are usually thought of not as particulars, but as universals shared by many sensations: this sensation x is red, and that sensation y is red. In subject-predicate logic: red(x) and red(y). This is what Nietzsche denies. Instead of sharing any common property, sensations x and y have their own individual colors: x is red₁ and y is red₂. These two individual colors are blurred or averaged into the shared (fictitious) color red, so, after blurring, x is red and y is red.

3. Against Identity as Endurance

3.1 That There Are No Enduring Things

Nietzsche, not surprisingly, denies any eternal endurance: "There are no eternally enduring substances; matter is as much of an error as the God of the Eleatics." (GS 109; WP 552d) Further, Nietzsche denies all endurance. He says it is an error that "there are enduring things." (GS 110). Identity as endurance is an old mistake: "To the plants all things are usually in repose, eternal, every thing identical with itself. It is from the period of the lower organisms that man has inherited the belief that there are *identical things*. . . . belief in unconditioned substances and in identical things is likewise a primary, ancient error" (HH 18). Duration is illusory: "Duration, identity with itself, being are . . . complexes of events apparently durable in comparison with other complexes" (WP 552c). Nietzsche says that "nothing in the real world corresponds" to identity through time; he says there is no thing that is "identical at different points of time." (HH 11) So, all sentences like "The shirt in your hand now is the same shirt as the shirt you wore last Friday" are false.

A substance is something that remains the same through change. There are no unchanging substances in chemistry: "To assert that diamond, graphite, and carbon are identical is to read off the facts naively from the surface" (WP 623). Identical cases in logic are beings that remain the same (enduring substances): "In order to think and infer it is necessary to assume beings: logic handles only formulas for what remains the same" (WP 517). The identical cases of logic are substances with attributes, which provide the truth-conditions for subject-predicate reasoning. Nietzsche denies that there are any substances.¹⁰ It is a useful error that "there are equal things; that there are things, substances, bodies." (GS 110); "being is an empty fiction" (TI 3:2). There are no substances: "in the strictest sense, nothing real corresponds to" the concept of substance. (GS 111) The concept of enduring substances emerges because the organisms that blurred their experience into an unchanging background "had an advantage over those that saw everything 'in flux'" (GS 111).

Nietzsche speculates that "a kind of becoming must itself create the deception of beings" (WP 517). The becoming that creates the deception of beings is the reflexivity of thinking. Human reason falsifies the data it receives from the senses. Sensation reveals no duration; but reason introduces "the lie of unity, the lie of materiality, of substance, of duration" into the data of experience (TI 3:2). We derive all our beliefs in enduring substances (in beings, enduring individual units, atoms of existence) from our belief that the reasoning ego is an enduring substance (WP 481 - 488, 517 - 519, 786). The ego is a doer added to the deeds of thinking (WP 488). The ego is an illusory constancy in the process of thinking (BGE 12, 16, 17, 19).¹¹ In particular, the fiction of the enduring ego leads to the fiction of the material atom (BGE 12; WP 625, 634, 635). Nietzsche denies that there is any enduring ego. Instead of an immortal soul, Nietzsche posits the occurrence of mortal souls (BGE 12; WP 489 - 492). So, he denies that physical atoms exist (BGE 12; WP 552, 624, 636, 689, 704); there are no "durable ultimate units, no atoms, no monads" (WP 715).

3.2 A World of Durationless Events

We have an idea of enduring things; we think of things as temporally extended substances that remain the same through change of attributes. Nietzsche says that our idea of enduring things is fictitious, that nothing in the real world corresponds to our idea of endurance. If he is correct, then there are no enduring things in the real world, that is, in the world as will to power. Everything real is temporally unextended; the world as will to power consists of durationless events. The will to power is a plenum of events (WP 520, 521, 548 - 552, 635). It is a set of deeds without doers (BGE 17; TI 3:5; WP 484, 488, 531, 548, 631). If we eliminate all our fictional projections into phenomena, then "no things remain but only dynamic quanta" (WP 635). These dynamical quanta are centers of force (WP 567, 568, 636). He says: "We may venture to speak of atoms and monads in a relative sense", and these are not enduring things, but events; Nietzsche's dynamical quanta are "treaty drafts of will that are constantly increasing or losing their power" (WP 715).

The world as will to power is a totality of durationless events. However, these events are not substances; they are not even instantaneous substances. Aristotelian subject-predicate logic is not appropriate for these events: "If I say 'lightning flashes', I have posited the flash once as an activity and a second time as a subject, and thus added to the event a being that is not one with the event but is rather fixed, is, and does not 'become'" (WP 531). If events are not substances, then they do not have properties as substances have attributes. If events are not substances, not even instantaneously, then events are not self-identical at all, not even for an instant. If the world as will to power is ultimately a continuous flux (WS 11; GS 111, 112; WP 604), then there are no things that are self-identical for any longer than an instant and there are no things that are self-identical even for an instant. There simply are no *things* at all (WP 520, 634).

4. Against Identity as Equality

4.1 Nietzsche on the Identity of Indiscernibles

Nietzsche says that the dominant tendency of living things is "to treat as equal what is merely similar"; but this is an "illogical tendency, for nothing is really equal" (GS 111). Nietzsche does not define "equality". Since Nietzsche often adopts Leibnizian concepts, one guess is that equality is Leibnizian indiscernibility:¹² x equals y if and only if, for every property p , $p(x)$ if and only if $p(y)$. So, the claim that nothing is really equal amounts to the claim that there are no numerically distinct but indiscernible things: if x is not one and the same as y , then x is not equal to y . Equivalently: if x equals y , then x is one and the same as y . This principle is known as the Identity of Indiscernibles.

The analysis of equality in Leibnizian terms is backed up by Nietzsche's example of the leaves: "it is certain that one leaf is never totally the same as another" (PT, p. 83). The example occurs in Leibniz. Here Nietzsche is surely invoking indiscernibility: it is certain that, if x is a leaf, y is a leaf, and x is not one and the same as y , then x does not equal y . Nietzsche also asserts that if x is a human being, y is a human being, and x is not one and the same as y , then it is not the case that x equals y . Human beings and their lives are unique parts of the universe and do not occur multiply but indiscernibly: "In his heart every man knows quite well that, being unique, he will be in the world only once and that no imaginable chance will for a second time gather together into a unity so strangely variegated an assortment like he is" (UM 3, p. 127); "everyone must have his own individual opinion concerning everything about which an opinion is possible, because he himself is an individual, unique thing which adopts a new posture towards all other things such as has never been adopted before" (HH 286). Nietzsche applies the same reasoning to human actions: "there neither are nor can be actions that are the same; that every action that has ever been done was done in an altogether unique and irretrievable way, and that this will be equally true of every future action" (GS 335); "all our actions are altogether incomparably personal, unique, and infinitely individual" (GS 354). If my analysis is correct, then Nietzsche's assertion that "nothing is really equal" is the claim that nothing is really indiscernible. The Identity of Indiscernibles holds in the world as will to power because *there are no indiscernibles* in the world as will to power. It could be otherwise: there could be two things x and y such that x is not one and the same as y , but x equals y . Black, for instance, describes a universe containing two equal yet numerically distinct spheres.¹³

In a remark on numbers, Nietzsche says: "The invention of the laws of numbers was made on the basis of the error . . . that there are identical things (but in fact nothing is identical with anything else); at least that there are things (but there is no 'thing')." (HH I:19) Here the attack on identity is not on identity as continuity or endurance. The claim that "in fact nothing is identical with anything else" is trivially true if "is identical with" means "is one and the same with". So, if Nietzsche means to say something, then he must be talking about type-identity. His statement, fully articulated, is "in fact nothing is type-identical with anything else". So, it is false to say that "This sentence is me" is type-identical with "This sentence is me". Likewise, for any type or concept F , it is false to

say that $F(x)$ and $F(y)$. If I am right that "identical cases" are tokens of types, then my claim that he denies that there are any type-identical things coheres with his assertions that identical cases are fictions. Nietzsche's next sentence seems to validate this interpretation: "The assumption of plurality always presupposes the existence of something that occurs more than once: but precisely here error already holds sway, here already we are fabricating beings, unities which do not exist" (HH I:19). The "something that occurs more than once" is the *universal* that is repeated in the plurality. If I say "This is a leaf" and "That is a leaf", then I have taken two things x and y as tokens of the type leaf. I have identified them under the type leaf. I do not know if I am right in interpreting Nietzsche's remark as a denial of type-identity, but if I am, then Nietzsche's position is far more radical than the claim that the Identity of Indiscernibles holds in the world as will to power. To deny that any things are type-identical is to say that for any x and y , there are no respects at all in which x equals y .

Every world of traditional subject-predicate logic (every model of a subject-predicate theory) consists of a set of substances and a set of attributes. Suppose there is a trivial substance-attribute world consisting of the four substances $\{A, B, C, D\}$ and the four attributes $\{\text{white, black, round, square}\}$. In this world, A is round and white; B is round and black; C is square and white; D is square and black. The Identity of Indiscernibles holds in this world: there are no substances x and y such that, for every property p in P , $p(x)$ if and only if $p(y)$. Still, if we focus on some set of properties smaller than the whole set P , we do find that there are identical substances. For instance: A is the same shape as B ; C is the same shape as D ; A is the same color as C ; B is the same color as D . To deny type-identity is to assert that no numerically-distinct substances share any attributes. If x and y are substances, and if x is not one and the same as y , then there is no attribute p such that $p(x)$ and $p(y)$. For instance, there is no color C such that $C(x)$ and $C(y)$; there is no shape S such that $S(x)$ and $S(y)$. In traditional logic, the extension of a predicate is the set of substances of which it is true. To deny type-identity is to assert that the extension of every predicate is a set with only one member, since no predicate is true of more than one subject. If we classify many particulars under some universal provided by language, we are guilty of logical error (GS 354; BGE 260). Just so, moral rules and regulations "may lead to some semblance of sameness, but really only to some semblance" (GS 335; WS 11). No attributes are shared by many substances. Universals are at most concepts.

If my analysis is correct, then all predicates (all linguistic terms that denote properties or relations) refer to particulars. There are no predicates p such that, for any x and any y , if x is not one and the same as y , $p(x)$ and $p(y)$. At most, x and y have similar predicates. So: it is never the case that x is red and y is red, rather, x has its own redness $\text{red}_1(x)$ and y has its own redness $\text{red}_2(y)$, and red_1 resembles red_2 , so that x *resembles* y . The properties red_1 and red_2 are individual properties. In contemporary metaphysics, particularized properties (and particularized relations) are known as *tropes*.¹⁴ So, if this analysis is right, Nietzsche has a trope ontology. No thing is type-identical with any other thing; at most, things resemble one another.¹⁵ Even more: if all unity is "unity only as organization and cooperation" (WP 561; cf. WP 489, 490, 492), then unitary things are merely *bundles* of tropes (WP 558).¹⁶ If this is right, then we can see how all tropes are

more or less similar. While tropes like the red_1 and red_2 are easily seen to be similar (they are, say, shades of one another), it is harder to explain how color-tropes such as red_1 are similar to shape-tropes (such as $square_1$), or to size-tropes (such as $small_1$). One possible explanation is that such tropes are more or less spatially or temporally similar: while red_1 has neither any chromatic nor geometric similarity to $square_1$, its spatio-temporal location is more or less similar to the spatio-temporal location of $square_1$. If red_1 , $square_1$, and $small_1$ are sufficiently spatially and temporally similar, then we take to be in the same bundle, which is one thing. This analysis applies just as well to, say, the charge, mass, and spin tropes of electrons.

4.2 Nietzsche on the Indiscernibility of Identicals

The Identity of Indiscernibles (which seems to hold in the world as will to power) is contrasted with the Indiscernibility of Identicals. The Indiscernibility of Identicals is also known as Leibniz's Law.¹⁷ Leibniz's Law says: if x is one and the same as y , then x equals y . More formally: if x is one and the same as y , then for every property p , $p(x)$ if and only if $p(y)$. Nietzsche appears to deny that Leibniz's Law holds in the world as will to power. The existence of "self-identical" things is presupposed "by every proposition of logic" (WP 516). Yet self-identity is a logical fiction (BGE 4).¹⁸

Aristotelian logic "handles only formulas for what remains the same" (WP 517). If Aristotelian logic is a falsification of events, then the "character of the world in a state of becoming" cannot be formulated according to the subject-predicate syntax of Aristotelian logic. So, relative to that logic, the world as will to power, the world as a continuous flux (WS 11; GS 112) is "false" and "self-contradictory". Nietzsche says: "There are no facts, everything is in flux" (WP 604). He says "Continual transition forbids us to speak of 'individuals,' etc.; the 'number' of beings is itself in flux" (WP 520). If we deny that there is even instantaneously any self-identical A , then for every event A in the world as will to power, A is not one and the same as A . At most, every event A in the world as will to power, A resembles A . Events are not self-identical; events only *resemble* themselves. This sets up a dynamical tension within the event. The law of non-contradiction no longer applies to them: events in the world as will to power are self-contradictory (WP 517, 584, 1067).

It is hard to see how it is even possible for events in the world as will to power to not be self-identical. If Nietzsche seriously denies the reflexivity of identity, then his world as will to power looks absurd. The will to power is not real but *surreal*.¹⁹ Every event is a self-differing coincidence of opposites. Still, I want to try to make sense of Nietzsche's claims. I reason as follows: (1) the world as will to power is a network of interrelated self-differing objects; (2) theories that have the world as will to power as their models must be networks of interrelated self-differing propositions; (3) self-differing propositions are logical paradoxes; (4) theories of will to power are networks of interrelated logical paradoxes.

The world as will to power is a relational system.²⁰ Natural science concerns relations: "All laws of nature are only relations between x , y , and z . We define laws of nature as

relations to an x, y, and z -- each of which we are in turn acquainted with only in relation to other x, y, and z's." (PT, p. 51); "what is a law of nature as such for us? We are not acquainted with it in itself, but only with its effects, which means in its relation to other laws of nature -- which, in turn, are known to us only as sums of relations" (PT, p. 87). If this is right, then the physical universe is nothing but a network of relational things (PTG, p. 53). These things are not isolated things-in-themselves (WP 553 - 569). The very concept "thing" is relational (WP 583). The properties of things come from their relations with other things: "The properties of a thing are effects on other 'things'" (WP 557).²¹ The world as will to power is "essentially a world of relationships" (WP 568); it is a network of interrelated dynamical force-points (WP 567); it is a world in which "everything is bound to and conditioned by everything else" (WP 584, 765, 1032; TI 6:8). Every quantum of will to power "affects the whole of being" (WP 634, 636); the world as will to power is a network of "dynamic quanta" in relations of tension "to all other dynamic quanta"; the essence "lies in their relation to all other quanta" (WP 635). If these force-points are self-differing events, then the world as will to power is a network of interrelated self-differing events. The differences of these events are coordinated in a kind of anti-harmony. Writing on Heraclitus (PTG 5 - 8), Nietzsche calls this *concord-in-strife*.

Logic itself is entirely relational: "The entire domain of 'true-false' applies only to relations, not to an 'in-itself' -- There is no 'essence-in-itself' (it is only relations that constitute an essence)" (WP 625). If Nietzschean logic is *about* anything, then its models are networks of self-differing force-points. Modern work on paradox defines theories that have such models. Logical paradoxes are propositions whose truth-values are self-contradictory; such propositions are not self-identical, in the sense that they are not self-consistent. Since Nietzsche occasionally describes the world as will to power in paradoxical terms (WP 639, 712, 1067; BGE 22, 56), systems of paradoxical propositions may serve as good theories of the world as will to power.²² The Liar paradox, Russell's²³ paradox, and Grelling's²⁴ paradox are instances of paradoxes through direct self-reference. The Liar paradox is the sentence "This sentence is false". If "This sentence is false" is true, then it is false; if it is false, then it is true. The Liar directly refers to itself. Its self-reference is self-negation. So, the Liar is not self-equivalent; it is self-contradictory. Its self-contradiction is Heraclitean concord-in-strife (PTG 5 - 8). While the Liar is just one proposition, there are systems in which many propositions interact paradoxically. Such systems are paradoxical through indirect self-reference. For instance, in the Middle Ages Buridan defined a system known as the Dualist: Socrates says "Plato speaks falsely"; Plato says "Socrates speaks truly". If S is the proposition Socrates utters and P is the proposition Plato utters, then S refers to P and P refers to S. The truth-values of the P and S are defined circularly: each is defined in terms of the other. It is possible to construct large networks of propositions whose truth-values are all defined circularly, in terms of one another, by indirect self-reference.²⁵

If networks of paradoxically interrelated propositions are good theories of the world as will to power,²⁶ then indeed "the entire domain of 'true-false' applies only to relations". Here I consider a few aspects of those theories. If every property of every thing is the effect of that thing on other things, then the properties of those other things are the effects

of those other things on still other things. Either this network of referred effects goes on to infinity or else each property in the network is ultimately defined circularly in terms of relational variations of itself. Since Nietzsche says that the world as will to power is only finitely complex (Z III:10/1; WP 595, 1062, 1066, 1067),²⁷ the network of propositional references does not go on to infinity. Each proposition is ultimately defined circularly in terms of itself. In other words, the network of mutually referring propositions is logically closed. In such networks, truth-values must be assigned to all the propositions at once; each proposition conditions all the others. There are, necessarily, many possible truth-value assignments that satisfy all the relations among the propositions; each assignment is equivalent to every other assignment. That's why the system is paradoxical. Truth-value assignments are *superimposed* on one another; many mutually incompatible truth-value assignments coincide. They are all compressed into a surreal unity. As such a unity, the system is surely chaotic (GS 109; WP 1067). One way to break up this chaotic unity is by associating each proposition with a point in space, and each truth-value assignment with a moment in time (so, each truth-value assignment to the whole network assigns one truth-value to each point in space). If truth-value assignment T_1 implies T_2 , the implication can be construed as a transition or change. In many cases, there are cycles of truth-value assignments: T_1 implies T_2 , T_2 implies T_3 , and so on to T_n , but T_n in turn implies T_1 . In such cases, there is a periodic cycle of states of the network. Here is where one might situate the eternal return of the same as a logical feature of any universe. Given Nietzsche's strong denials of indiscernibility, the recurrence of "the same" is at most some cosmic combination of tropes resembling some earlier cosmic combination. For such resemblance, one must trade in two-valued logic for some kind of fuzzy logic.

5. Conclusion

An early remark on Heraclitus's conception of becoming unites Nietzsche's criticisms of identity as endurance and identity as equality. Heraclitus conceived of becoming "under the form of polarity, as being the diverging of a force into two qualitatively different opposed activities that seek to re-unite. Everlastingly, a given quality contends against itself and separates into opposites; everlastingly these opposites seek to re-unite"; opposites are "attached to one another and interlocked at any given moment like wrestlers of whom sometimes the one, sometimes the other is on top" (PTG p. 54). Accordingly, becoming consists of pairs of particularized qualities (tropes) that are both opposed to and bound to one another. Just so, paradoxes like "This sentence is false" bind true and false. The tension is dynamical: these opposed tropes are dynamical quanta of will to power. Pluralities of these opposed tropes stand in logical relations of indirect paradoxical self-reference. Within the network of opposed tropes there are tightly bound knots or bundles (WP 558, 561) that we (falsely) think of as unified self-identical enduring substances bearing universals. Identity, for Nietzsche, emerges from difference. Nietzsche challenges us to think of difference as logically prior to identity. Whether thought can meet this challenge remains to be seen.

References

¹Many thanks to M. Cuonzo and the Philosophy Department at Long Island University for helpful comments during my presentation of this paper at their Colloquium.

²Nietzsche's works are cited by text abbreviation and section number unless otherwise noted. The texts are: *Philosophy in the Tragic Age of the Greeks* (PGT), cited by page number, trans. M. Cowan (Washington, DC: Regnery Pub. Inc, 1996); *Untimely Meditations* (UM), cited by essay number and page number, trans. R. J. Hollingdale (New York: Cambridge University Press, 1983); *Human All too Human* (HH) and *The Wander and His Shadow* (WS), trans. R. J. Hollingdale (New York: Cambridge University Press, 1986); *The Gay Science* (GS), trans. W. Kaufmann (New York: Random House, 1974); *Beyond Good and Evil* (BGE), trans. W. Kaufmann (New York: Random House, 1966); *Twilight of the Idols* (TI), trans. R. J. Hollingdale (New York: Penguin Books, 1984); *The Will to Power* (WP), trans. W. Kaufmann & R. J. Hollingdale (New York: Random House, 1968); *Philosophy and Truth* (PT), cited by page number, trans. D. Breazeale (London: Humanities Press, 1979).

³For more on the world as will to power, see: A. Moles, *Nietzsche's Philosophy of Nature and Cosmology* (New York: Peter Lang, 1990); R. Welshon, "Nietzsche's Perspectivist Ontology", *International Studies in Philosophy* 28 (3) (1996), 77 - 98; R. Welshon, "Perspectivist Causality", *International Studies in Philosophy* 30 (3) (1998), 39 - 48; T. McWhirter, "Nietzsche's Physics", *International Studies in Philosophy* 31 (3) (1999), 5 - 18.

⁴I use writing from Nietzsche's published corpus, plus those parts of the *Nachlass* available in English as *The Will to Power* and *Philosophy and Truth*. Scholars such as Kaufmann and Magnus wish to devalue or discredit these notebooks; others, such as Danto and Moles, value them as highly as the published writings. I side with Danto and Moles, for precisely the reasons offered by Moles. See A. Moles, *Nietzsche's Philosophy of Nature and Cosmology*, (New York: Peter Lang, 1990), Introduction, section II. I always try to correlate the *Nachlass* notes with the published writings.

⁵While Kaufmann is known for his contention that Nietzsche was "plainly no system-thinker" (Kaufmann, *The Will to Power*, p. 318, fn. 29), Nietzsche scholarship (through Danto, Deleuze, Schacht, Stack, Nehamas, Moles and others) has steadily evolved towards the opposite view. That Nietzsche is a systematic thinker is explicitly and clearly argued in J. Richardson, *Nietzsche's System* (New York: Oxford University Press, 1996).

⁶My analysis of Nietzsche's theory of identity suggests three further projects. I do not pursue these projects here. First: Nietzsche's theory of identity should be reconciled with his theory of the eternal recurrence of the same. See S. Reeves, "Eternal Recurrence and the Principle of the Identity of Indiscernibles", *International Studies in Philosophy* 28 (2) (1986), 49 - 57. While some commentators argue that these two aspects of Nietzsche's thought are irreconcilable, I think they can be reconciled. Second: Nietzsche's writings on political equality should be compared with his logical writings on identity. While his denial of the equality of persons leads him to argue against some aspects of democracy, I believe that his contention that equality is a life-affirming fiction entails that democratic equality, while fictitious, is affirmative. Third: the concept of identity seems to link Nietzsche's mature theory of the world as will to power with the metaphysical ideas in his

early writings, *The Birth of Tragedy* and *Philosophy in the Tragic Age of the Greeks*. His later writings on the will to power should be compared with his early presentations of Dionysus as a self-contradictory Oneness, Apollo as the principle of individuation, and Heraclitus.

⁷See D. Wiggins, *Sameness and Substance* (Cambridge, MA: Harvard University Press, 1980); M. K. Munitz (ed.), *Identity and Individuation* (New York: New York University Press, 1971); P. Geach, "Identity", *Review of Metaphysics* 21 (1967), 3 - 12; J. Perry, "The Same F", *Philosophical Review* 79 (April 1970), 181 - 200; R. Routley & N. Griffin, "Towards a Logic of Relative Identity", *Logique et Analyse* 85-86 (1979), 65-83.

⁸The identity relation is sometimes expressed in English just by "is". For example: "Clark Kent is Superman". But that's too vague for my purposes: there are many senses of "is", such as the "is" of predication ("Socrates is white"); the "is" of role-occupancy ("Bill is President"); the "is" of reduction ("Diamond is carbon"). To avoid such ambiguities, instead of letting "is" denote identity, I always add "the same" to identity relations.

⁹H. Seigfried, "Law, Regularity, and Sameness: A Nietzschean Account", *Man and World* 6 (4) (November 1973), 372 - 389.

¹⁰A. Moles, "Nietzsche's Attack on Substance", ch. 2 in *Nietzsche's Philosophy of Nature and Cosmology*.

¹¹N. Davey, "Nietzsche and Hume on Self and Identity" *Journal of the British Society for Phenomenology* 18 (1) (1987), 14 - 29.

¹²For Nietzsche and Leibnizian indiscernibility, see p. 51 of S. Reeves, "Eternal Recurrence and the Principle of the Identity of Indiscernibles", *International Studies in Philosophy* 28 (2) (1986), 49 - 57.

¹³M. Black, "The Identity of Indiscernibles", in J. Kim & E. Sosa, *Metaphysics: An Anthology* (Malden, MA: Blackwell, 1999), 66 - 71.

¹⁴For tropes, see the essays in Part VI of S. Laurence & C. Macdonald, *Contemporary Readings in the Foundations of Metaphysics* (Malden, MA: Blackwell, 1998).

¹⁵If events bear particularized properties (tropes), they are linked by particularized resemblance relations. The resemblance relations are also tropes. Suppose we have events x , y , and z , and property tropes red_1 , red_2 , and red_3 such that $red_1(x)$, $red_2(y)$, and $red_3(z)$; we now have (among others) the resemblance relations: $R_1(x, y)$, $R_2(y, z)$, and $R_3(x, z)$. Since these resemblance relations are particularized, there are resemblance relations between them: $R_4(R_1, R_2)$, $R_5(R_2, R_3)$, and so on. The result is an infinite progression of particularized resemblance relations. Perhaps this fills in the relational structure of what Nietzsche calls "the continuum" (WS 11; GS 112).

¹⁶For a nice discussion of Nietzsche's bundle theory of objects, see pp. 832 - 834 of S. Hales, "Nietzsche on Logic", *Philosophy and Phenomenological Research* 56 (4) (December 1996), 819 - 835.

¹⁷Here are two principles: the Indiscernibility of Identicals ($(\forall p)(\forall x)(\forall y)((x = y) \Rightarrow (p(x) \Leftrightarrow p(y)))$), and the Identity of Indiscernibles ($(\forall p)(\forall x)(\forall y)((p(x) \Leftrightarrow p(y)) \Rightarrow (x = y))$).

¹⁸S. Hales, in "Nietzsche on Logic", argues that Nietzsche's rejection of self-identity is part of Nietzsche's anti-realism. Insofar as Hales is talking about the ordinary middle-sized things of the human life-world, he is surely right: their self-identity is a fiction.

However, Nietzsche's remarks on Heraclitus and becoming (particularly in PTG 5 - 8), on the self-contradictoriness of the Dionysian oneness in *The Birth of Tragedy*, on chaos (GS 109) and on the self-contradictoriness of the world as will to power (WP 1067), suggest that Nietzsche really does deny self-identity to events in the world as will to power.

¹⁹The surrealist Andre Breton says that the juxtaposition of opposites that occurs in surrealist art and poetry produces a spark; the spark should be compared to Nietzsche's lightning flash. See A. Breton, *Manifestoes of Surrealism*, trans. R. Seaver & H. R. Lane (Ann Arbor, MI: University of Michigan Press, 1972), p. 36-38.

²⁰For contemporary conceptions of reality as a purely relational system, see: J. Barbour, "On the Origin of Structure in the Universe" in E. Rudolph & I.-O. Stamatescuc (Eds.) *Philosophy, Mathematics, and Modern Physics: A Dialogue* (New York: Springer-Verlag, 1994), 120 - 131; R. Dipert, "The Mathematical Structure of the World: The World as Graph," *Journal of Philosophy* 94 (7) (July 1997), 329 - 358.

²¹A. Nehamas, *Nietzsche: Life as Literature* (Cambridge, MA: Harvard University Press, 1985), ch. 3.

²²R. H. Grimm, "Circularity and Self-Reference in Nietzsche", *Metaphilosophy* 10 (3 & 4) (July/October 1979), 289 - 305.

²³Russell's paradox concerns the set of self-excluding sets: $\{ S \mid S \notin S \}$. A self-excluding set is a set that does not have itself as a member. If that set is not a member of itself, then it is self-excluding and so must be a member of itself; but if it is a member of itself, it is self-excluding and so must not be a member of itself.

²⁴Grelling's paradox concerns heterologicality. A word is autological if and only if it applies to itself. Since "polysyllabic" is polysyllabic, it is autological. A word is heterological if and only if it does not apply to itself. Since "monosyllabic" is not monosyllabic, it is heterological. The word "heterological" is paradoxically heterological.

²⁵P. Grim, G. Mar, and P. St. Denis, *The Philosophical Computer*. Cambridge, MA: MIT Press, 1998.

²⁶E. Steinhart, "The Will to Power and Parallel Distributed Processing", in B Babich & R. Cohen, *Nietzsche, Epistemology, and Philosophy of Science* (Dordrecht: Kluwer Academic Publishers, 1999), 313 - 322; P. Douglas, "The Fractal Dynamics of a Nietzschean World", also in B Babich & R. Cohen, 323 - 330.

²⁷It only needs to be locally finite: each center of force is directly connected to only finitely many others; but there can still be infinitely many centers of force within the continuum.