Advances in modern logic have provided grounds for a review of Herakleitan fragments. Focusing on fragments that are indeed explicitly contradictory, we suggest that true contradictions play an important part in Herakleitos’ theories. It turns out that this analysis is much simpler than the traditional modern alternatives and more faithful to the ancient interpretations of the fragments. Significantly, we can better analyse Herakleitos’ theories *ex post facto* by using modern logical techniques. Herakleitos, nicknamed “The Obscure” for his style of writing (full of puns and hidden meanings) may thus be better understood as the first philosopher to believe in true contradictions. It seems that modern logic has found the key to unlock some of the Herakleitan riddles.

Introduction

Many debates in the modern philosophy of logic have their origins in ancient Greece. This essay will focus on the origins of one of these debates, namely whether sentences are true or false or something else. This debate is very important, since the semantic theory of logical

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validity rests on notions of sentential truth and falsehood. Regarding sentential truth and falsehood, two positions will be mentioned here: on the one hand the consistentist logicians (such as Frege and Russell) argue that sentences are either true or false, not both true and false and not neither true nor false. Alternatively, the dialetheist logicians such as Priest and Routley argue that some sentences are both true and false. It turns out that different types of logics can be developed from the different semantic interpretation of sentences. If this debate remains unresolved, the question of which logic best represents the notion of validity remains unresolved.

The consistentist position is that all contradictions are false. Traditionally, the consistentists have stamped their view on contradiction by formulating the traditionally named Law of Contradiction which states “It is not the case that both A and not A”. In this paper, in accordance with recent usage, the Law of Contradiction will be referred to as the Law of Non-Contradiction (LNC). For the consistentist, a contradiction destroys a theory. The consistentists take LNC quite seriously: Archbishop Thomas Cranmer said of contradictions “You shall never be good logician, that would set together two contradictories: for that, the schoolmen say, God cannot do.” (Little, et al. 1973: see Contradiction).

The implication of the modern dialetheist position is that there are some true contradictions. Clearly, the general validity of LNC is denied by the dialetheist. Graham Priest in In Contradiction cites the semantic paradoxes, amongst others, as examples of true contradictions. The semantic paradoxes include such famous examples as the ancient Greek Liar paradox “I now speak falsely” attributed to the Megarian logician, Eubulides (400 BCE). If this sentence is true, then it is false. If it is false, then it is true. So it is both true and false. The Liar paradox is an apparently sound argument which has been philosophically scrutinised for more than two millennia: there is still no general consensus as to what is wrong with the argument, if anything is wrong at all. A dialetheist is also committed to the thesis that there are true contradictions in the world. The ontological argument appeals to possible incon-
sistency in sub-atomic physics, and also to the analysis of motion as inherently inconsistent. Note that for the dialetheist, a contradiction does not necessarily destroy a theory. For more dialethic logical detail see Priest (1987:219–41).

The modern debate has an ancient parallel; in fact, that the ancient Greeks disputed about the problem of sentential truth and falsehood has been well-established (Kneale and Kneale, 1962:16). For example, the anonymous Megarian text Δισσοὶ Λόγοι (Dissoi Logoi) is very interesting. The fourth antinomy in Dissoi Logoi argues that it is possible to uphold either side of a contradiction about true and false discourse. In the thesis the author “proves” that true and false discourse are identical by quoting the sentence “I am an initiate”. This sentence is true when spoken by person A, but false when spoken by person B. The earliest Dissoi Logoi dates back to is 400 BCE.

Aristotle (384 BCE), in his Metaphysics, claimed that LNC is “the firmest of all principles”. Eubulides responded with the Liar paradox: if all contradictions are false, what about the sentence “this sentence is false”? Chrysippus (281 BCE), a consistentist logician, wrote a text (now lost) titled “On those who think the same sentence to be both true and false” (Priest and Routley, 1989:5), which indicates that true contradictions were taken seriously by some ancient philosophers.

The standard view held by most scholars is that Parmenides was the earliest consistentist (fl. 500 BCE). But discovering the earliest dialetheist is controversial. I will argue that Herakleitos of Ephesus (600 BC) was the first dialetheist. There are three schools of thought on the matter.

1. Most ancient commentators asserted that Herakleitos was inconsistent and consequently confused. Aristotle certainly argued for this position.

2. Modern consistentists Russell and Kirk argue that Herakleitos was only superficially inconsistent. According to them, if the “correct” rational reconstruction is given it will be seen that Herakleitos was a consistentist after all.
3. Modern dialetheists agree with the ancient commentators that Herakleitos was inconsistent but do not think Herakleitos was confused. If this third position is correct, then Herakleitos was the originator of dialetheism. The aim of the present paper is to review the arguments for and against these three positions. It will be argued that Herakleitos was indeed the first dialetheist.

The Herakleitan fragments

Herakleitos is difficult to interpret. Barnes in *Early Greek Philosophy* asserts that no general consensus has been achieved on the following issues:

1. Translating the Greek into English. Herakleitos uses word play and puns in almost all his fragments, and most if not all of the effect of the Greek words is lost in translation.

2. Arrangement of the fragments. All interpretations of Herakleitos’ thought have proved controversial. From arbitrary ordering to controversial opinionated ordering, the fragments are still the source of much controversy. The interpretation of the fragments in this paper is bound to be controversial to some philosopher.

The three fragment types this paper will focus on are usually referred to as the Logos fragments, the Unity of Opposites fragments (which is a subset of the Logos fragments), and the Flux fragments. The source of the fragments in this paper is Barnes’ *Early Greek Philosophy*.

The Logos fragments argue for the natural connection of all things. For example fragment B94 “Just as [the principle of the Logos] alternately makes the world from itself and again itself from the world. All things, Herakleitos says, are an exchange for fire and fire for all things, as goods for gold and gold for goods.” (Barnes, 2001:60). On the face of it, this does not imply that all things are identical, but merely that all things are connected. This consistentist interpretation on the Logos has the majority support of scholars on Herakleitos, both ancient and modern. I return to this later.
In contrast, the Unity of Opposites suggests a genuine identity between opposites. This is best represented by the fragment B60 “The path up and down is the same” (Barnes, 2001:51). The Unity of Opposites as an identity of some opposites is widely endorsed by the ancient philosophers such as Parmenides, Aristotle, Simplicius, Hippolytus and Sextus Empiricus, but also by dialetheists such as Hegel, Priest and Routley. Most modern consistentist Herakleitan scholars (Kirk, Russell) do not accept this interpretation of the Unity of Opposites.

The Flux fragments are best represented by the fragment type B49a “We step and do not step into the same rivers” (Barnes, 2001:70). Some, for example Priest, argue that the Flux is best seen as dialetheist. Priest maintains the Flux is a version of his own and Hegel’s theory that motion is inconsistent. Again, some of the ancient commentators seem to agree with the paraconsistent interpretation. Modern consistentists disagree, and attempt to interpret this fragment type as consistent.

**Herakleitos as inconsistent and confused**

Indications on inconsistency in Herakleitos are found amongst most of the ancient commentators. Parmenides the Eleatic (540 BCE) is the first philosopher to implicitly refer to Herakleitos as inconsistent. However, Parmenides was thoroughly consistentist; so in his view, Herakleitos was reduced to error and falsehood. Firstly let us establish the Parmenidean consistency assumptions. LNC is established early in *The Way of Truth*:

> But come, I will tell you — preserve the account when you hear it—
> the only roads of inquiry there are to think of:
> one, that it is and that it cannot not be
> is the path of persuasion (for truth accompanies it); …
> (Barnes, 2001:80)

Truth accompanying the principle that it is and that it cannot not be is evidently equivalent to the Law of Non Contradiction. Parmenides’
assertion rules out the possibility of contradiction, since there is no option for “it is and it is not”. Parmenides then states another form of LNC, that contradictories are not true together in the following fragment:

For it can be,  
And nothing cannot. This I bid you ponder.  
For from this road of inquiry <I bar> you [B 6.1-3],  
<he adds>  
and then from the road along which mortals who know nothing wander, two-headed; for impotence in their breasts guides their erring thought. And they carried along both deaf and blind, bewildered, undiscerning crowds, by whom to be and not to be are deemed the same and not the same; and the path of all turns back on itself.  
[B 6.4–9]  
(Barnes, 2001:81)

According to Parmenides, those for whom to be and not to be are deemed the same are wrong. An inconsistent theory implies erring thought, impotent soul, unwillingness to listen to reason, unwillingness to see evidence! A brutal deduction indeed, surpassed in truculence only by the modern consistentists. Clearly, Parmenides is a consistentist philosopher.

In The Cosmic Fragments, Kirk argues that the fragment B 6.4–9 implicitly refers to Herakleitos, and references to the inconsistent philosophers and to the path do seem to confirm this. If so, we would at least have established that Parmenides’ view was that Herakleitos is inconsistent. Also, according to Parmenides’ own consistentist assumptions, Herakleitos’ theory is false. Obviously, this accusation need not a priori affect a Herakleitan, because a Herakleitan will not agree with the Parmenidean consistency assumptions. Kirk argues that it is likely that Parmenides’ theoretical attack on those who identify opposites refers to Herakleitos (Kirk, 1954:2). “The path of all turns back on itself” refers to the Herakleitan fragment B60 “The path up and down is the same” (Kirk, 1954:211). Therefore, Parmenides
implicitly views Herakleitos as inconsistent, and wrong.

Aristotle is famous for his opinion that LNC is the firmest of all principles (Bochenski, 1951:38). Aristotle clearly thought Herakleitos was inconsistent. Not surprisingly, Aristotle thought Herakleitos’ theory was false because it was inconsistent. Regarding the inconsistency of Herakleitos, in the *Topics* Aristotle outlines the rules of engagement when defending a thesis in argument:

That is why those who introduce others’ opinions — for example good and evil are the same thing, as Herakleitos says — refuse to admit that contraries do not belong at the same time to the same thing; not because they do not themselves believe this, but because on Herakleitos’ principles one has to say so. The same thing is done also by those who take on the defence of another’s thesis; their aim being to speak as would the man who stated the thesis (Barnes, 1984:269).

In Aristotle’s *Metaphysics Γ*, 1012a24, Herakleitos’ denial of LNC is explicitly stated again: the reason Herakleitos denied LNC is that since it is the case that some opposites are identical, then it is not the case that LNC is true. Ancient commentators such as Hippolytus (Barnes, 2001:51), Simplicius (Kirk, 1954:94) and Herakleitos (not the Ephesian, but the historian) (Barnes, 2004:70) also confirm the identity of some opposites in Herakleitos’ theory.

Sextus Empiricus is another one of the ancient sources suggesting that Herakleitos did believe in contradictions actually existing, hence denying LNC:

It is true that Aenesidemus and his followers used to say the Sceptic Way is a road leading up to Herakleitan philosophy, since to hold that the same thing is the subject of appearances is a preliminary to holding that it is the subject of opposite realities. And while the Sceptics say that the same thing is subject of opposite appearances, the Herakleitans go on from this to assert their reality (Sextus Empiricus, *Outlines of Pyrrhonism*: I, XXIX 210–13).

So, the sceptic view that the same thing apparently possesses opposite attributes or qualities is regarded as similar but not as dogmatically extreme as the Herakleitan view that it *really* possesses such qualities.
Sextus argues that honey appears to be sweet to a healthy person, bitter to some people who are ill. We can infer from the previous sceptic argument therefore that the Herakleitans must have thought that honey actually was in essence both bitter and sweet at the same time.

These ancient commentators support the natural interpretation that Herakleitos denied LNC, but they conclude too hastily that denying LNC implies Herakleitos’ theories were absurd *in consequence* of the contradictions.

**Herakleitos as consistent**

According to the consistentists, it is unreasonable to argue for true contradictions in Herakleitos for two main reasons: (1) for the consistentists, any interpretation of the Unity of Opposites as an identity of opposites is mistaken. Therefore, according to the consistentists, many ancient commentators on Herakleitos were mistaken to interpret the Unity of Opposites as an identity of opposites; and (2) since it is possible to rationally reconstruct the fragments within a consistentist framework, the consistentists argue it is not necessary to interpret the fragments as dialetheist. Kirk in *The Cosmic Fragments* and Russell in *History of Western Philosophy* argue that Herakleitos was only inconsistent in the way he chose to write, whereas what he meant should be interpreted as consistentist. At most, argue the consistentists, Herakleitos can be accused of being misleading for writing in riddles and puns.

The consistent interpretation of the fragments concerned faces two main problems: firstly, it goes against the testimony of the ancients closest to Herakleitos; and secondly some major rational reconstructions of the meaning of the fragments are required to eliminate the inconsistencies.

Instead of accepting that Parmenides did refer to Herakleitos, Kirk attempts to cast doubt on whether Parmenides really did refer to Herakleitos at all (Kirk, 1954:13). Kirk also asserts that Aristotle was wrong: he was a bad historian of ideas (Kirk, 1954:xi), and that
Simplicius and Hippolytus were wrong too, since they probably followed Aristotle’s interpretation (Kirk, 1954:94). The testimony of Sextus Empiricus on the Herakleitans (quoted above in this paper) is not even mentioned by Kirk in *The Cosmic Fragments*.

Herakleitos was not confused (read inconsistent), according to the consistentists, and Herakleitos did not intend to argue for opposites that are identical. Russell and Kirk agree that the Logos is a theory of connection in nature, but contend that the Unity of Opposites does not imply that some contradictions are identical. Instead, the “connection” meaning of the Logos is said to be the key to the meaning of united opposites: some opposites are merely connected, not identical. Several examples are given. For instance, Russell (1957:63) argues that the Unity of Opposites is one of a balanced adjustment of opposing tendencies, not actually contradictory. Behind the apparent strife between opposites, there lies a hidden harmony or attunement, which is the world. Russell agrees that this appears to conflict with the fragment type “we step and do not step” and the even more contradictory fragments “we are and we are not”, and “the upward path and the downward path is the same”. Both Russell and Kirk reconcile the *prima facie* inconsistent fragments by arguing that the sloping road allows the potential for both up and down, what matters most is the way you chose to travel: up or down, not both up and down at the same time (Kirk, 1954:211). In this interpretation, “up” is merely relative to that which is “down”. A consistent situation can appear to have conflicting features, but these features are not contradictory (Kirk, 1954:94). Thus, Russell argues, just as one could not conceive of an upward path without a downward path, so no one could conceive a concept of good without a concept of evil, that is the world is full of consistent yet opposing but not contradictory forces (Russell, 1957:62).

**Herakleitos as dialetheist**

Recent developments in modern logic have shown that inconsistency does not necessarily imply absurdity. The meaning of a logic is altered
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by semantic adjustments: in dialethic logic, sentences can be either true or false, or both true and false. The inventors of dialethic logic, Graham Priest and Richard Routley, have argued that Herakleitos was the first dialetheist (as did Hegel). Priest and Routley agree that the Herakleitan Logos fragments refer to physical connection, not contradiction (Priest and Routley, 1989:6), and that the Unity of Opposites is where contradiction is to be found:

The principle truth of the Logos, that everything is united, is supported by, but of course not entailed by, the Unity of Opposites. It is part of the weaker theme, that some opposites are not merely connected but identical, a theme that suffices for dialethism given only familiar assumptions (Priest and Routley, 1989:6).

The argument that identical opposites, which actually exist, imply true contradictions goes as follows:

1. “The path up and down is the same” is equivalent to “The path up and the negation of the path up is the same” (Interpretation of Herakleitos according Parmenides, Aristotle, Simplicius, Hippolytus, Sextus Empiricus, Hegel, Priest, Routley);

2. Replace “path up” and “the negation of the path up” with A and ~A respectively (modern logical replacement of line 1, where ‘~’ is the logical connective for negation.);

3. A is equivalent to ~A (The logical identity of A and ~A from line 2);


If the premises are true, and according to Herakleitos they are, then the conclusion is true also: thus we have a true contradiction. In agreement with ancient consistentists from Parmenides on, Herakleitos is found to be inconsistent by the dialetheist logicians, but this time with very different implications. The theory is inconsistent but not absurd, since Herakleitos did not think all contradictions are true, but only that some were true.
In chapter 11 of *In Contradiction*, Priest argues for motion as inconsistent. This theory, Priest and Hegel argue, originates with the Herakleitan Flux fragments. For Priest, motion is a change of position. At any given instant a moving object is at position A because it has just reached position A. However, the moving object is also not at position A, since it is not stationary but moving away from position A. This is what Herakleitos meant in the Flux fragment “In the same river, we step and do not step, we are and we are not”.

Given that Herakleitos flourished around 500 BC, he is dated ahead of the closest ancient dialetheist, the author of the *Dissoi Logoi*. So Herakleitos is the first dialetheist in Greek history (Priest, Routley, 1980:5). Since the consistentists do not differentiate between the Logos and the Unity of Opposites in implication, one wonders why one should distinguish between the Logos and Unity of Opposites at all. The ancient commentators and the paraconsistentists do indeed allow for a difference between the fragment types. Since the consistentist interpretation goes against the grain of the ancients, and being less natural it requires more rational reconstruction, it is not the best way to interpret Herakleitos.

**Conclusion**

We have seen that consistentists have interpreted Herakleitos in one of two ways: ancient commentators tended to see him as inconsistent and confused, whereas some recent commentators have seen him as consistent though misleading. Both interpretations suffer from an ignorance of the resources that recent logic has discovered. This refutes the former charge of confusion, in particular. The latter objection requires that a less natural interpretation be placed on Herakleitos’ actual words, against the understanding of both the ancient consistentists and the modern dialetheists. It would appear, then, that the most reasonable position to take is that Herakleitos was indeed the first dialetheist.
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