

# ISSA Proceedings 2002 - Reversing Perceptions Of Probability Through Self- Referential Argument: Interpretation And Analysis Of Protagoras' Stronger/Weaker Fragment



The ancient sophists were accused of teaching how to make the worse argument the better. A key historical text that records this accusation is Protagoras' 'weaker/stronger' fragment. This fragment occurs in chapter twenty-four of the second book of Aristotle's *Rhetoric* in the context of a list of fallacious syllogisms used by sophists. Richard McKeon (1941), in his edition of Aristotle, translates it as 'making the worse argument seem the better'. The original meaning of this fragment has been the subject of debate among scholars of the history of rhetoric. Traditionally it has been taken to mean that sophists made logically inferior arguments look logically superior, but a revisionary understanding of this fragment offered by Edward Schiappa (1991) asserts that it meant that the sophists improved the 'weak' arguments of the Athenian underclasses. In this presentation I will offer a new interpretation that is better founded in the context in which Aristotle cites Protagoras. The stronger/weaker fragment is actually referring to a particular kind of self-referential argument. I will explain how these arguments work, offer a critique of Aristotle's critique of them, explore the peculiar conditions of their validity as well as their relation to the everyday logic of prejudice and stereotype.

## *1. Making the worse argument better: history and interpretation*

Schiappa (1991: 103-116) is one of the most recent interpreters of the weaker/stronger fragment. In his discussion of it he has made two points. First,

the 'seem' is spurious, not in the original text but added by McKeon in the translation. Second, the words translated as 'worse' and 'better', *hetto* and *kreitto*, are more accurately translated as 'weaker' and 'stronger'. More importantly, Schiappa ultimately interprets the fragment in the context of Aristophanes' play, *Clouds*, where two *logoi* (arguments or discourses) are personified. One is characterized as *kreitto* and allied to traditional Homeric values of honor and noble birth. The other is characterized as *hetto* and allied to 'rational argument' and 'agnosticism'. Schiappa, completely dismissing Aristotle's interpretation as prejudiced, takes the *Clouds*' dialogue as evidence that Protagoras was interested in helping the weak and downtrodden become strong and displace the old order. This may or may not be true, but I do not believe that Aristotle should be dismissed without an explanation of how and why he misinterpreted Protagoras' argument.

To unravel the meaning of this fragment then, we should begin by quoting it in its whole context. Here is the McKeon translation of *Rhetoric* 24, 1402a 3-27:

Again, a spurious syllogism may, as in 'eristical' discussions, be based on the confusion of the absolute with that which is not absolute but particular. As, in dialectic, for instance, it may be argued that the what-is-not is, on the grounds that the what-is-not is what-is-not; or that the unknown can be known, on the grounds that it can be known to be unknown: so also in rhetoric a spurious Enthymeme may be based on the confusion of some particular probability with absolute probability.

Now no particular probability is universally probable: as Agathon says,

*One might perchance say that this was probable -  
That things improbable oft will hap to men.*

For what is improbable does happen, and therefore it is probable that improbable things will happen. Granted this, one might argue that 'what is improbable is probable'. But this is not true absolutely. As, in eristic, the imposture comes from not adding any clause specifying relationship or reference of manner; so here it arises because the probability in question is not general but specific. It is of this line of argument that Corax's Art of Rhetoric is composed. If the accused is not open to the charge - for instance if a weakling be tried for violent assault - the defense is that he was not likely to do such a thing. But if he is open to the charge - i.e. if he is a strong man - the defense is that he is still not likely to do such a thing, since he could be sure that people would think that he was likely to do it.

And so with any other charge: the accused must either be open to it or not open to it: there is in either case an appearance of probable innocence, but whereas in the latter case the probability is genuine, in the former it can only be asserted in the special case mentioned. This sort of argument illustrates what is meant by making the worse argument seem the better. Hence people were right in objecting to the training Protagoras undertook to give them. It was a fraud; the probability it handled was not genuine but spurious, and has a place in no art except rhetoric and eristic. (1402a3-27)

It would seem that when Aristotle talks about Protagoras' practice of making the weak argument strong he has in mind something far more specific than making a good argument bad or championing the cause of the downtrodden lower classes. In the quoted passage Aristotle is objecting specifically to the practice of making the probable seem improbable on the grounds that there is a difference between particular and absolute probability. Perhaps this kind of probability argument is specifically what Aristotle believe Protagoras to be doing in 'making the weaker argument stronger'.

Let us take a closer look at the logic of the weaker/stronger argument that Aristotle is criticizing. There are two interpretive levels in the quotation from Aristotle. On the first level Aristotle provides an example of an argument, what we might call the 'strong man argument':

*If the accused is not open to the charge - for instance if a weakling be tried for violent assault - the defense is that he was not likely to do such a thing. But if he is open to the charge - i.e., if he is a strong man - the defense is that he is still not likely to do such a thing, since he could be sure that people would think that he was likely to do it.*

On the second level, he offers criticism and interpretation of the first level argument. Let us leave to one side for the moment Aristotle's second level commentary, and along with it the question of whether Aristotle is justified in making it, and focus on providing a fuller description of the first order argument.

Like the famous paradox of the Cretan Epimenides, who said 'All Cretans are liars' the strong man argument is self-referential. As the sentence 'All Cretans are liars', when spoken by a Cretan, produces a paradox by obliquely referring to itself, so the strong man argument attempts to alter an audience's perception of what is probable by using the conclusion 'It is probable that this strong man

committed this crime that could only have been committed by a strong man' as the most important premise in its own counter-argument. Important structural differences exist between the liar paradox and the strong man argument, differences that we will explore in a moment, but in both there are conditions of intelligibility that have consequences that contradict those conditions upon which they are contingent. 'All Creatans are liars' is only intelligible as a true sentence or as a false sentence, but the consequence of its being true is that it is false, and the consequence of its being false is that it is true. Similarly, a given set of circumstantial evidence is intelligible as making it probable or improbable that Smith killed Jones, but if the evidence is understood as indicating that Smith is probably guilty, then this itself counts as a reason that he is probably not. In both cases the 'then' of an 'if...then...' statement refers back to the 'if' and contradicts it. These are conditionals at war with themselves.

Self-referential argument is very much a part of the sophistic tradition, a fact which lends credence to my interpretation of the weaker/stronger fragment. Self-referential argument can be found in other fragments of the early rhetorical tradition associated with the figures of Protagoras, Corax, and Tisias. Diogenes Laertius (9.56) reports that Euathlus, a student of Protagoras, refused to pay the fee he had agreed to give Protagoras for teaching him how to argue in court, complaining that he had not yet won a courtroom victory. They went to court to settle the matter. There Protagoras argued that, win or lose, he should be paid by his student because, 'If I win this dispute I must be paid because I've won, and if you win I must be paid because you've won your first case'. This story is probably a spurious reworking of the earlier story of Corax and Tisias story, the legendary Sicilians who were supposed to have been the first to teach rhetoric, which itself is likely to be a fiction. In the Corax and Tisias story, Corax, the teacher, argues as Protagoras does here, but Tisias, the student, argues that if he wins he should not have to pay because he's won, and if he loses he should not have to pay because he still has not yet won (Schiappa 1991: 215). The historical factuality of the incidents is not important here. What is obvious is that these are teaching stories that have deep roots in the rhetorical tradition. These arguments have the same self-referential form that Aristotle cites in reference to Corax and Protagoras and exemplifies with the strong man argument.

To this evidence add a passage from Plato's *Phaedrus* which criticizes Tisias' use an argument about a strong man that bears more than a passing resemblance to

Aristotle's example of a weaker/stronger argument.

*Socrates:* Very well, then, take Tisias himself; you have thumbed him carefully, so let Tisias tell us this. Does he maintain that the probable is anything other than that which commends itself to the multitude?

*Phaedrus:* How could it be anything else?

*Socrates:* Then in consequence, it would seem, of that profound scientific discovery he laid down that if a weak but brave man is arrested for assaulting a strong but cowardly one, whom he has robbed of his cloak or some other garment, neither of them ought to state the true facts; the coward should say that the brave man did not assault him singlehanded, and the brave man should contend that there were only two of them, and then have recourse to the famous plea, 'How could a little fellow like me have attacked a big fellow like him?' (273 a-c)

In all cases, the argument cites the contingency of its own failure as a ground for its success. This is truly turning the weak argument into a strong one, one that is paradoxically strong because it is weak. What could better affirm Protagoras' assertion that for every argument there is a counter-argument? Given all this, it seems probable that the weaker/stronger fragment does refer to a kind of self-referential argument. If this is accepted, the next question is whether Aristotle is justified in his criticism of the strong man argument. To answer this question we will need to venture into the still largely uncharted territory that lays between logic and psychology.

## *2. Is the strong man argument valid?*

Self-referential paradoxes have been the agitant for some of the biggest and most enduring headaches of analytic philosophy in the twentieth century. Are they ever valid, and if so under what circumstances? In this context, one must mention Bertrand Russell's paradox and the theory of logical types, found in the *Principia Mathematica* (Whitehead & Russell 1910), which is designed to solve it. Russell's paradox, as simplified and explained by Ernest Nagel and James Newman (1960), runs as follows:

Classes seem to be of two kinds: those which do not contain themselves as members, and those which do. A class will be called 'normal' if, and only if, it does not contain itself as a member; otherwise it will be called 'non-normal'. An example of a normal class is the class of mathematicians, for patently this class itself is not a mathematician. An example of a non-normal class is the class of all

thinkable things; for the class of all thinkable things is itself thinkable and is therefore a member of itself.

Let  $\text{>N=}$  by definition stand for the class of all normal classes. We ask whether N itself is a normal class. If N is normal, it contains itself (for by definition N contains all normal classes); but, in that case, N is non-normal, because by definition a class that contains itself as a member is non-normal (24).

Russell, as a logician, declares that this apparent paradox occurs because of a confusion of logical types: one can never include a class within a class of individuals. For example, the class of dogs can never be included in a set that also includes individual dogs like Spot, Rex, and Ginger. 'Dogs' is of a different logical type than 'Spot'. There are no non-normal classes. It is illegitimate for the class of all thinkable things to include individuals and classes together without hierarchal distinction. Even if there were non-normal classes, the same logic dictates that one can not include a class of classes like 'N' in a class of classes that are classes of individuals. That's like putting 'dogs' in with Rover and Ginger, but raised by one power.

The theory of logical types places certain limits on self-reference. An individual can refer to itself, but a class can not, through self-reference, include itself as an individual within itself. By the same token, a class of classes can not by self-reference include itself as one of the classes within itself, which is more to the point in unraveling Russell's paradox.

One might be tempted to think that the strong man argument unravels in a way that is similar to Russell's paradox and that Aristotle's claim that it confuses absolute probability with particular probability is valid and in fact a very early articulation of the theory of logical types. And this is most likely true for the part of the argument that refutes the assertion that the probable is the improbable. But we should be more careful with the strong man argument itself. After attempting to use the theory of logical types as a basis for his own theory of framing, the anthropologist Gregory Bateson (1972: 177-193) came to the conclusion that logical types are not in fact a very good model of human communication. 'It would be bad natural history to expect the mental processes and communicative habits of mammals to conform to the logicians' ideal' (180).

We violate the theory of logical types every time a discussion of the rules of a game become part of the game itself - a predicament which is the essence of a certain kind of politics, for example, when politicians debate how to redraw the

districts which they represent.

In order to more accurately describe play, politics, schizophrenia and other complex mammalian behavior and misbehavior, Bateson formulated a theory of psychological frames, a theory which has proved to be influential in American communication studies, inspiring Erving Goffman's Frame Analysis (1974), the concept of metacommunication formulated by Watzlawick, et al (1967), the recognition of the argumentative tactic that Herb Simons called 'going meta' (1994), and the widely disseminated general concept of framing. Although Bateson's theory of psychological frames was inspired by Russell's theory of logical types, Bateson pointed out that there are some important differences between the logical and the psychological. Logical types are transitive: If A is greater than B, and B is greater than C, then A is greater than C. It is because of their transitivity that logical types can not be haphazardly transposed. But psychological frames are intransitive, just because A frames B, and B frames C doesn't mean that C can't then frame A. This kind of thinking is sometimes nothing more than an empty logical circularity, as in the textbook example of circular reasoning: 'Everything that the Bible says is true because God wrote it. It is true that God wrote the Bible because it says so in the Bible'. But there are certain times when such thinking is valid, if not logically valid, then psychologically valid.

These patterns of circular logic reflect the inherent circularity of reflective thought. 'I am thinking that...' is an act of self-reference which generates valid circularity, the kind of circularity that is at the heart of the strong man problem. If one carefully considers the situation of the strong man one must concede that it is at least possible that, if the strong man engages in self-reflection, the fact of his great strength might actually figure as a reason for him to be extra careful about abusing his strength. And a plausible defense is that this reflective strong man would not be stupid enough to do something of which others would so readily suspect him. Thus our quick suspicion of him can count as a reason that we should be less suspicious of him. The reason that this is in fact a valid type of argument is that human beings are reflective and reactive creatures in a way that Russell's classes of classes are not[i]. Self-reference is built into thought, and the realization that a certain course of action is probable can change the probability of that course of action. This defense is not possible for the liar paradox, which is a paradox of self-reference but does not turn on the probability of a course of

action. But because of the inherent self-referentiality of human thought, reframings of probable courses of action have a special intransitive logic: one of the pieces of evidence that can count for or against the probability that a reflective human will do something can in fact be a conclusion about the probability of her doing it.

Obviously, the self-referential logic of reflexive psychological frames can become circular, but it is a circularity which we so in fact often live. More than thirty years ago, the American psychologist R.D. Laing charted, in free verse form, the baroquely pathological twistings of human logic loops in his rich but scary little book, *Knots* (1961). It is full of little nuggets like the following:

They are playing a game. They are playing at not  
playing a game. If I show them I see they are, I  
shall break the rules and they will punish me.  
I must play their game, of not seeing I see the game. (1)

Or then again,

Jack feels Jill is devouring him.

He is devoured  
by his devouring fear of  
being devoured by  
her devouring desire  
for him to devour her.

He feels she is eating him  
by her demand to be eaten by him. (16-17)

And lest we forget that we are also in the land of self-fulfilling prophecies:  
Jack frightens Jill he will leave her  
because he is frightened she will leave him. (14)

Laing reminds us of how often convoluted cycles of self-reference are at play beneath the surface of intimate relations, not to mention the trading on Wall Street, global power politics, and the edicts of bureaucrats. Joseph Heller's famous *Catch 22*, after all, also has the form of a self-contradictory self-reference. Furthermore, if some unscrupulous editor surreptitiously spirited the following



rendering of the strong man argument into a 2005 edition of *Knots*, it's unlikely that anyone would catch on:

A is either likely or unlikely to have committed crime X.

If A is unlikely to have done it, then A is likely to be innocent.

If A is likely to have done it, then A would realize he would be suspected of X.

If A knew he would be suspected of X, A is unlikely to have committed X.

Therefore, A is unlikely to have committed X whether he was likely to have committed it or not.

Of course, one could add that A, knowing that because everyone would see that it would be unlikely for someone so likely to commit crime X to actually commit it, would be likely to take advantage of the situation and commit the crime that he was thought to be so unlikely to commit because he was so likely to commit it. Once you begin one of these cycles of reflexive reframing, no outcome is final. Another level is always theoretically possible, although as a practical matter the human mind has trouble functioning beyond level four or so.

The upshot of all this is that Aristotle is not justified in his criticism of the strong man argument. In fact, the critical section of the quoted passage does not hold up well at all. The argument 'What-is-not is what-is-not so not being is being' fails for a different reason than the argument about something improbable probably happening. As is well known, the argument about being fails because it does not distinguish between the existential 'is' and 'is' as a logical copula (Ackrill 1971). Aristotle gives an adequate account of the failure of the probability argument. It does not follow from the observation that something improbable will probably happen that the improbable is probable, and his distinction between particular and absolute probability might well presage the theory of logical types. But the strong man argument can not be tarred with the same brush, being protected by the special consideration due to human reflection, circular though it may be.

This is not to say that there are no criticisms which Aristotle might have leveled at the strong man argument. It is a trick argument with specific limits to its validity, and these limits are to be explored in the next section.

### *3. Limits to the validity of strong man arguments*

Firstly, it must be admitted that I have been using the term 'probable' in a very suspicious way. Consider the following strong man modification of the Epimenides paradox: Epimenides the Cretan liar says, 'Being a Cretan, it is not probable that I

would lie, for I know because everyone suspects me of lying I would be found out'. But if all Cretans thought like Epimenides then it is improbable that any particular Cretan would lie, and this would invalidate the foundational premise that Cretans are liars. The only way around this problem is to recognize that we are not dealing with a statistical kind of probability that has predictive value. Probability must be understood in its ancient sense for the strong man argument to be valid. The ancient sense of probability belongs to the logic of reputation, stereotype, and prejudice.

To make clear the proper way of reading probability in ancient Greek texts, let me digress briefly to say a few words about the Greek word that is translated as probability, *eikos*. *Eikos* should not be understood as probability in the modern statistical sense. A better translation is 'likely', for the meaning of the root *eoika* is 'to be like or similar'. We take our word 'icon' from it. Both *eikos* and the English word 'likely', in fact, work in the same way, using similitude to indicate 'probability' [ii]. How does 'like' come to stand for 'likely'? Actually, the relationship between the English words 'like' and 'likely' offers a hint. In judging the truth of a picture, one might look closely at how much it resembled the objects which it represented. If one found a picture like one remembered the objects pictured, then one would find the events portrayed to have been likely to have occurred. In an analogous way, an argument that Smith killed Jones would seem likely if Smith was depicted in a way that was like a stereotypical image of a murderer held by members of the audience. The likely was a fit between two sets of appearances, those presented in the argument and those in the experience of the audience. In this way, in argument as in painting, the like became the likely.

It is this sense of the probable as a likeness between an individual and a stereotype, a sense that is still much more operational in today's world than teachers of critical reasoning would like, that we must bring to our understanding of the strong man argument. To say that a Cretan will probably lie does not mean that 9 out of 10 Cretans will lie when asked a particular question, it means that Cretans are like the stereotypical Cretan, who is a liar, and so therefore it is likely that they will lie. The stereotype provides an unassailable foundation upon which loops of self-referential logic can grow, preventing fatal contradiction in much the same way that Russell's logical types do. When we read probability in this sense, Epimenides' thought process would run as follows: Epimenides knows that

Cretans are and always will be thought to be liars and that no action of his can change that. He knows that people will expect him to act like the stereotypical Cretan and lie. Therefore, he takes extra care to deal honestly with people, as he knows that everything he says will be checked up on. The probability we are dealing with here belongs not to the logic of the weather report, but rather to the logic of prejudice.

The second limitation on the validity of the strong man argument follows from the first. Because we are dealing in the logic of stereotype, strong man arguments can only validly occur in situations where an individual is aware of and cares about what others think of him or her. If Epimenides didn't care about what others thought about his veracity, there would be no reason for him to take extra care to tell the truth. If he lied and was caught, it simply wouldn't matter to him. Strong man loops only begin to occur in situations where an individual is contemplating how he or she appears to others.

The third limitation on the validity of the strong man argument is this: strong man arguments only apply to conditions that can be willfully brought about or avoided. If all Cretans were pathologically compulsive liars who couldn't tell the truth even if they wanted to, then a strong man type argument would be irrelevant. Epimenides wouldn't be able to tell the truth, even if he knew that everyone knew that he was lying.

The final limitation is that, although valid under certain circumstances, strong man arguments have no predictive value whatsoever. They function more as rationalization than reason, potentially valid but never entirely sound. This is true not only because of the nature of the ancient sense of probability, but also because the logic can reverse itself ad infinitum. Epimenides might tell a lie and try to convince those he told it to that he would never lie because he knew that, as a Cretan, he could never get away with it. Even though this is about the practical limit of reversal (any further reversal would strain both the understanding and credibility) it is enough to ensure for every self-reference there is a counter self-reference. To this uncertainty must be added the uncertainty about the exact way in which a situation is made to refer back to itself. Consider that Epimenides might, despite being a Cretan, be an honest man at heart. But he might decide that because he is a Cretan and no one will believe him anyway, he might as well tell lies. The argument that Epimenides, despite being honest, can not help but tell lies because he is a Cretan is every bit as 'probable' as the argument that Epimenides, although basically dishonest, would not dare tell lies because he is a

Cretan. And of course each of these arguments can be reversed by moving to a higher level of reflexivity.

The fact that the conclusions of strong man type arguments can be reversed so many times in so many ways means that, in the final analysis, a wise individual must make decisions about what to do based on considerations beyond the mirror-play of appearance. An evening of reflection would demonstrate to Epimenides that he can generate good reflexive arguments both for and against lying. To decide whether truth or falsehood would come out of his mouth the next day, he would need settle his mind that the truth is intrinsically valuable, whether anyone else believes he is telling the truth, thus removing the condition of caring about appearances necessary to generate the strong man loop. If self-referential arguments were indeed prevalent in the courtrooms of Plato's day, the necessity of finding argumentative considerations independent of appearance might have been one of the pressures that caused Plato to gravitate towards his system based on forms beyond appearance.

#### *4. Conclusion*

In this essay I have made the case that when it was said that Protagoras could make the weaker argument stronger what was being referred to was a method of self-referential argument used by Protagoras and other sophists. Because of the self-referential nature of human thought, these self-referential arguments can have a certain kind of validity. Schiappa's ultimate assessment that weaker/stronger arguments worked on behalf of the Athenian underclasses might not have been that far off in the sense that these arguments were useful in turning the prejudicial logic of eikos against itself. All one has to do is go back to some of the working examples and substitute 'gypsy' for 'strong' and 'black' for 'Cretan' to get the idea: 'Because I am a gypsy, they will think that I am I have stolen the money. But because I knew that they would suspect this, I would not have done it'. But unfortunately the nature of strong man arguments makes possible infinite reversals, which can just as easily serve prejudice as oppose it. Still, exploration of these arguments gives us more than a new insight into a fairly obscure fragment from an ancient sophist, it gives us a Laingian insight into the tortured logic that prejudice imposes on its objects.

#### NOTES

**[i]** Even in the field of philosophy and pure mathematics the theory of logical types has not escaped modification and challenge. See Quine (1970)

**[ii]** The advent of eikos taking on its sense of ‘probability’ was a fairly late occurrence. Eikos does not occur in Homer. A similar word, eikuia, is used, but always to designate resemblance. The probability meaning of eikos is also absent from Hesiod and Pindar. In Pindar’s For Melissus of Thebes 4.45 eikos does occur, but means ‘like’. Eikos and closely related words occur eight times in Aeschylus and only once, in Seven Against Thebes, can it be taken to mean ‘likely’ (Agamemnon 575, 586, 760; Seven Against Thebes 519; Eumenides 194, The Libation Bearers 560, 590; Suppliant Women 283). Eikos is not problematized as a probability term until Plato, and not defined as the probable – that which generally happens – until Aristotle’s Rhetoric 1375a3.

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