

Philosophy 338
Philosophy of Law
2017
Note Twenty-three

THE ABSOLUTELY LAST WORD ABOUT *EX FALSO*

This note comes in two parts. Part One is *mandatory reading*. Part Two is *discretionary reading*. Part One is helpful material to have in preparing for the final exam. Part Two would have no such beneficial value. Even so, Part Two is important. It closes the question of *ex falso*'s truth or falsity. But, again, for purposes of the final exam prep, Part One is what you need.

PART ONE

1. The position we arrived at in our discussion on March 30th is that, for the purposes of the finalexam *ex falso*'s truth or falsity remains an open question, as also do the validity or invalidity of the *ex falso* proof. This gives us two possibilities to consider. One is that *ex falso* is true and its proof valid. The other is that *ex falso* is false and its proof invalid.
2. Consider now the first alternative. If *ex falso* is true, then in any information-system containing even one instance of inconsistency, every truth expressible in that system has a validly derived negation. In other words, the whole system detonates. To put it yet another way, for every true proposition in it, the system logically implies that it is false. On the face of it, this is a cognitive disaster, in which anyone involved in such a system loses her cognitive purchase, and falls irrecoverably into the chasm of logico-epistemic chaos.
3. Appearances notwithstanding, if we simply used our heads and god-given talents to apply our due diligence principles – respect for data, data collection, data analysis, empirical sensitivity, etc. – buttressed by the empirical discouragements of big-box scepticism – we'd see in a flash that a detonated system is not one that paralyzes rational thought and the advancement of knowledge. And a good thing, too. If human memory and belief has detonated and many of our most productive scientific theories as well, along with all the big information systems of institutionalized humanity, there could be no cognitive advantage in them. Verily, we would have descended to overall logico-epistemic perdition. But we haven't, and everyone knows it.
The question that bites now is, how come? The answer, whose details even as far as I know them, is that we have an inconsistency filter that keeps the false negations of true propositions out of cognitive harm's way. Humanity may be awash with wall to wall inconsistency but, in being so very little damage is done to the cognitive economy.
4. We now take up the second alternative in which *ex falso* is false and its proof invalid. That certainly curtails with wide swaths of detonation, but since all the systems mentioned just above are inconsistency-robust (on account of their bigness), they are invaded by perpetual, pervasive, inerradiable inconsistencies, in whose absence these systems would lose their cognitive value. Consider any given one of these systems, the human belief-system say. For

pervasively many (not all) its true propositions, it is validly derivable that it is false. Given the side-spreadedness of pervasive inconsistency, this is a huge blow to the logico-epistemic integrity of any system that has it. It is a smaller disaster than detonation, but a crippling one all the same. Recall that, owing to the computational intractability of even elementary inconsistency checks, pervasive inconsistencies are not systematically recognizable, and even if they were they couldn't be got rid of without further collapse.

Accordingly, a modified inconsistency-management filter thesis is called for here too.

PART TWO

1. It only remains to close the *ex falso* question by confirming the proof that validates it. Here again is the proof in full dress for. Let *S* schematize any statement of English, say "The cat is hungry" and not-*S* its negation, say "It is not the case that the cat is hungry. Then we proceed:

- (1) *S* and not-*S* by assumption
On the principle that if the cat is hungry and not hungry, then it is true that it is and is not,
- (2) It is true that *S* and not-*S*.
On the principle that if two propositions are true, neither of them can be false, we have it that
- (3) *S* is true.
On the principle that of any pair of propositions at least one of which is true,
- (4) Of the pair (*S* is true, *X* is true), at least one of them is true, because of line (3).
By the reasoning that got us from (2) to (3), we also have it that
- (5) Not-*S* is true.
On the principle that if one of the pair {*S*, *X*} is true (where *X* is arbitrary), and, by (5) it's not *S* that is true, then by the exhaustion of alternatives, we must have it that
- (6) *X* is true.
- (7) Therefore, on the assumption of (1) we have it by truth-preserving reasoning that any *X* follows. Q. E. D.

2. Of course there is a problem here. Although we have it at (5) that not-*S* is true, we already have it at (3) that *S* is true. So why would we privilege (5) over (3) at line (6)?

Whether we should or not we should depends on how the negation-operator "not-" functions in this proof.

In all systems of logic and in all natural languages too, negation is a *flipper of truth values*. For example, if some proposition *S** is true, then when the negation-operator is applied to it flips the truth value of *S** to the truth value of not-*S**, which means that if not-*S* is true, *S* must be false.

Go now to lines (2) and (3) of the proof. If not (2) negation doesn't flip the truth-value of S, then negation has lost its *negational potency* right at the beginning of the proof. Therefore there'd be no problem to be bothering with it at line (1). Line (1) *wouldn't be inconsistent!* If not inconsistent at line (1), why in the world would it be that it begets inconsistency *anywhere* lower down the proof, notably at (5)? On the other hand, if negation is full-powered at the beginning, by what non-*ad hoc* reasoning could it be supposed that it loses its potency further down the proof chain? The question answers itself. Negatively (no pun!)

This concludes the defence of the *bona fides* of *ex falso*, and ends our consideration of it here.

3. How does all this bear on the inconsistently-based verdicts of criminal juries? I'll provide the final answer to this at tomorrow's closing lecture (April 4). Don't forget that Thursday's class will be devoted entirely to Q & A.