lenism." In my Shakespearean Tragedy and the Elizabethan Compromise (New York: New York Univ. Press, 1957), I said that in Fluellen's speech Shakespeare "poked fun at straining for extended historical analogies" (p. 215) and that this should warn us against turning the plays into "subtle and intricately constructed allegories" (p. 216). However, Fluellen is not the only Shakespearean character to speak of "figures." The Bishop of Carlisle speaks of Richard II as "the figure of God's majesty" and says that if he is deposed England will be called "the field of Golgotha" -a reference to the crucifixion which, together with Richard's reference to those who, "as Judas did to Christ," betrayed him and delivered him to his "sour cross" and York's description of the jeering crowd's throwing dust upon Richard's "sacred head," indicates that if Shakespeare did not write detailed allegories he did suggest analogies.

My second statement is that I am the author of two of Levin's anonymous quotations. In forgoing the usual documentation Levin was evidently animated by charitable motives: he thought that he had exposed the nakedness of the critics he cited and was giving them a protective cloak of anonymity. The reader, however, will judge for himself whether or not it was necessary for him to imitate the behavior of the Good Samaritan meeting the man stripped of his garments in Christ's parable—if I may be permitted the comparison.

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Hamlet and Logic

To the Editor:

Harold Skulsky's logical analysis (*PMLA*, 89, 1974, 477–86) of Hamlet's quatrain: "Doubt thou the stars are fire, / Doubt that the sun doth move, / Doubt truth to be a liar, / But never doubt I love" (II.ii.116–19), the logical form of which he says is "easy to mistake" (p. 485), is itself mistaken. In his effort to search for evidence that would prove his major contention that Hamlet is something of an anti-Cartesian methodical doubter, Skulsky asserts that a minor premise is an affirmation of a major, when in reality the major premise is itself a hypothesis. The major premise in Hamlet's quatrain, like most majors in natural language logic, is a universally quantified assumption:

(1)
$$(x)(Px \supset \overrightarrow{Qx})$$

which, if translated into para-English, means: "for all truths, if truth is analytical, i.e., tautological, then it is not the case that x, one particular instance of truth, is to be doubted." The minor premise simply acknowl-

edges the possibility that (1) is (or may be) not true:

(2)
$$(\exists x)(Px \supset Qx)$$

which asserts: "there exists [or, if modal logic is used, as it must be in natural language logic, "there may exist"] at least one instance [in this case 3, 2 of which are synthetic truths and 1 analytic] in which (1) is not true." Hence

(3)
$$\vdash (x)(Px \supset Qx)$$

which translates as: "it is asserted that it is not the case that for all truth, if truth is analytical, then it is not the case that x is to be doubted."

There are two types of "truth" in Hamlet's syllogism: synthetic, the first two lines, and analytic, line 3. Line 1 is

 $(\exists x)(Px \cdot Qx) = {}_{df}$ "there exists an element such that that element is a star *and* it's on fire."

Line 2 is

 $(\exists x)(P_X \cdot Q_X) =_{di}$ "there exists an element such that that element is a sun *and* that sun does not move."

Line 3, however, is

 $(x)(Px \supset Qx) = _{df}$ "for all elements, if that element is a truth, then it cannot be a lie."

Failure to differentiate these two types of truth is what led Harry Levin to misread the lyric as a simple contrast of Hamlet's *non-disputandam* love with the facts of the scientific world. Skulsky also fails to see the distinction when he says "a Pyrrhonian Hamlet is effectively ruled out by his equation of physical knowledge with the maxims of pure logic" (p. 485). It is only line 3 that could be categorized as "pure logic." The prior two lines are maxims of pure science.

Nothing has been said so far about the adversative of line 4. It is in this line, and only in this line, that we can get some insight into Hamlet's psychological assumptions. What the line asserts with its "But"—the "and surprisingly" of P. F. Strawson's translation equivalent—is a conjunctive sentence that in a loose paraphrase says: "That's OK. But never doubt that my love (and my strong assertion of it?) is not far truer than those analytic- and synthetic-truth functions." In other words, "nothing pleases me more than that which befalls preposterously."

I submit that these four lines are no proof of Hamlet the Unskeptic or Hamlet the Confident. What they do reveal is the absolute nonequivalence of natural language logic, as used by a poet, and the pure logic of logical theory. Shakespeare used whatever materials were at hand for the creation of poetry, and since poetry is the "art of feigning" (Sidney) or "the art of lying" (Wilde), he used logic as a kind of antilogic— Touchstone is the supreme example—perhaps as a relief valve from all those years of having to study formalized versions of the *Prior Analytics*, a task he was required to perform since that first day he sat on the first form's benches, age five.

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Mr. Skulsky replies:

John Murray divides his attention between the criticism of my interpretation and the exposition of his own. I shall reply symmetrically by expounding mine (which he appears to misconstrue) and then going on to criticize his.

Hamlet seems to me to be arguing as follows. (For convenience I have, at perhaps tedious length, included those premises, 1 (a) and 1 (b), that should normally be omitted as truisms.)

1. (a) For any three things, if the first is more certain than (R) the second and the second is more certain than the third, then the first is more certain than the third.

(b) If the genuineness of my love (L), for example, is more certain than the (specified) matters of science and logic (S), and these in turn are more certain than matters admitting a reasonable doubt (D), then the genuineness of my love is more certain (a fortiori) than matters admitting a reasonable doubt.

2. But the genuineness of my love is indeed more certain than the specified matters, and these in turn are indeed more certain than matters admitting a reasonable doubt.

3. Hence the genuineness of my love is, easily, more certain than matters admitting a reasonable doubt.

For those who enjoy symbolism, the argument may be set out formally as follows:

| 1 (a) | $(\mathbf{x})(\mathbf{y})(\mathbf{z})((\mathbf{R}\mathbf{x}\mathbf{y} \cdot \mathbf{R}\mathbf{y}\mathbf{z}) \supset (\mathbf{R}\mathbf{x}\mathbf{z}))$ | Premise | |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|
| 1 (b) | $(RLS \cdot RSD) \supset (RLD)$ | (a), UI | |
| 2 | RLS · RSD | Premise | |
| 3 | RLD | 1 (b), 2, TF | QED |

Ostensibly, to be sure, Hamlet simply forbids his lady to be uncertain of his love (l. 4) and bids her to be uncertain about matters of science and logic (ll. 1–3). He does not say outright that the bidding is merely rhetorical—that all these matters are beyond serious question. But there would be no point in the Prince's singling out candidates for doubt, in order to praise his devotion as indubitable by invidious comparison, if it were not in his view uncommonly difficult or even perverse to be in doubt about the candidates as well. One does not knowingly boast of one's triumph over a puny rival. If the actual difference between a wart and Ossa were minute, it would be idle for Hamlet (in a similar argument) to proclaim sonorously that the tomb he is prepared to heap on himself would make Ossa like a wart; there would still be room for the supposition that Hamlet's tomb is, if not a wart, at most a molehill.

One could of course maintain that Hamlet finds the issues he mentions eminently doubtful and introduces them to the ironic end of damning his devotion with faint praise. But the context seems to indicate that the Prince's assurances of love, however wooden, are not consciously insincere. The very absence of irony, as I argue in my essay, reflects unfavorably on Hamlet's intellectual sophistication, for the scientific issues he mentions were subjects of lively dispute at the time of Shakespeare's writing. Yet here they are treated by implication as no less resistant to controversy than the principle of bivalence, the abandonment of which was not seriously attempted until a much later pericd. This last is the point of my remark about a Pyrihonian Hamlet, which Murray takes to deny a distinction tetween science and logic that in fact I was concerned to stress.

The argument that Murray attributes to Hamlet is both incoherent and unwarranted by the text. The second proposition denies the first and is equivalent to the third (with the exception of an ambiguous prefix (\vdash) unjustified by the foregoing premises). The statement that no tautology is doubtful and that, nevertheless, there *is* a doubtful tautology entails the affirmation of the first clause as well as its denial. Indeed, being a contradiction, the statement trivially entails *any* statement. Murray's modal version is scarcely *en* improvement. The truth of his first proposition is not refuted by the mere possibility that the proposition is false.

But the text absolves the Prince of responsibility for this confusion. To bid us doubt truth to be a liar, and the rest, is no more to acknowledge the possibility of a reasonable doubt to this effect than to bid us get with child a mandrake root is seriously to propose a novel exploit in paternity. Murray apparently wishes to deny the soundness and completeness of any formal system of logic with respect to a natural language in the hands of a poet. His statement is too vague and sweeping to command unqualified assent, but liberally construed as a warning against hasty formalization, it is wholesome enough to make one wish it had been heeded by its author. In glossing Hamlet's imperatives as indicatives without due regard to context and rhetorical convention, the correspondent recks not his own rede.

Murray's reading of Hamlet's last line seems to me arbitrary, but as he has neglected to support it, I shall