

# Fritz Machlup's Quasi-Subjectivism

## An Uneasy Marriage Between Austrian Economics and Logical Empiricism

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Fritz Machlup was educated in Vienna, Austria, the intellectual centre of several influential twentieth century movements in philosophy and science. The Austrian economists Carl Menger, Ludwig von Mises and Friedrich von Wieser; Ludwig Wittgenstein and the logical positivist Vienna Circle; and Karl Popper are all associated with Vienna. As Machlup (1978a: ix-x) puts it, in this milieu, how could one escape an interest in methodology? It is not surprising then to find these streams reappearing in Machlup's methodology, which represents an uneasy marriage between Austrian economics and positivism.

Milton Friedman's instrumentalist charter "The Methodology of Positive Economics" (1953) is probably the most famous paper in economic methodology; it is less well-known that Fritz Machlup presented substantially the same program in his 1946 paper, "Marginal Analysis and Empirical Research" - predating Friedman by 7 years - and again in his 1955 paper "The Problem of Verification in Economics" (hereafter "The Problem"). Friedman's lack of philosophical framework is evident: very few commentators have been able to agree on what Friedman actually meant. By contrast, Machlup had a command of the philosophy of science that was both wide and deep, and was able to write with precision and great clarity. Friedman's paper has had the greater impact on the history of economic thought, but Machlup's papers are the better expositions of logical empiricism and instrumentalism. "The Problem" remains one of the most powerful pieces of writing in economics.

Friedman's instrumentalism has been reconstructed as an attempted reconciliation between the neoclassical marginalist tradition and empiricism (Seccareccia 1988). A similar reconstruction can be made with Machlup, whose program attempts to accommodate both Austrian subjectivism and the new empiricist movement. This is evident in "The Problem" where his rhetorical strategy is to present "apriorism" and "ultra-empiricism" as opposing extremes in order to claim the methodological middle ground. Eugene Rotwein (1973: 368) notes that Machlup tries to "amalgamate aspects of the Austrian position with the position taken by Friedman". Robert Batemarco (1985: 33) likewise notes Machlup's mixture of Austrian and positivist ideas. While Machlup did not draw directly from Popper his methodology is generally consistent with Popper's views on social science, an intriguing result which has not been noted.

In section 1 I outline Machlup's quasi-subjectivism derived from his Austrian heritage and in section 2 his logical empiricism. In section 3 I consider how he deals with the problem of self-reports, the point of contention between these two streams. Section 4 concludes.<sup>1</sup>

## 1 Fritz Machlup's qualified Austrian heritage

Machlup is, of course, Austrian by birth, and to some extent an "Austrian" in his economics. His teachers included Friedrich von Wieser and Ludwig von Mises. Machlup (1982: 42) declares himself to be a fourth generation Austrian economist, an affiliation repeated by Israel Kirzner (1987: 147). (The recognition is mutual; see Machlup 1982.) According to Mark Perleman (1991: xii), when Machlup arrived in the U.S.A. in the late 1930s he was "perceived (both by himself and others) as a prototype Austrian economist".<sup>2</sup>

Machlup notes the diversity within the school, but lists the following as tenets held by the majority of Austrians (1982: 39-40; Kirzner 1987: 148): methodological individualism, methodological subjectivism, marginalism, the determination of demand by subjective valuations (utility), opportunity costs, time structure of consumption and production. This list of Austrian ideas is presented with an eye towards accommodation with neoclassical economics; Machlup himself, like most neoclassical economists, can identify with them all although methodological subjectivism turns out to be problematic. He defines it thus: "*Methodological subjectivism*. In the explanation of economic phenomena we have to go back to judgments and choices made by individuals on the basis of whatever knowledge they have or believe to have and whatever expectations they entertain..." (1982: 40).

For subjectivists the fact that the subjects of social sciences are self-conscious and able to self-report (while those of natural sciences are not) creates a separation between the phenomena and methods of the social and natural sciences. Subjectivists accept self-reports as objective data; objective because the valuation is done by the agent and not by the observer. Machlup notes that it is common to "mistake the prescription of scientific "objectivity" for a proscription of "subjectivism" - confusing "subjective" in the sense of not impartial with "subjective" in the sense of cognizant of inner experiences" (1978d: 343). Machlup denies that economics can be understood on the basis of an exclusively third-person perspective. He states that the "'facts' of the social sciences cannot be 'observed' with the five senses" because "the records in the social sciences always go back to some person's interpretations of subjective meanings - such as 'costs', 'prices', ... 'gift', 'theft'" (1978c: 187, n.48; 186-7). For instance, simply observing A take something from B does not provide the information to determine whether A has bought, borrowed, stolen or been given it.

The polar opposite of subjectivism is behaviourism which treats economic agents as impersonal objects (on a par with rocks, trees or rats) and thus insists that there is no difference between social and natural sciences. Behaviourists ignore or repudiate self-reports and accept only third-person observations, i.e. take account only of public, outwardly recordable behaviour. Behaviourism is a result of the application of radical empiricism to social science as exemplified by the logical positivist movement in economics (particularly Hutchison 1938/60). On this score Machlup (1955, 1966, 1978c) explicitly rejects operationalism (and thereby logical positivism and behaviourism) - what he calls "ultra-empiricism". He rejects naive empiricism and any slavish copying of the methods of the natural sciences in economics (1978b, 1978d).

Machlup's paper "The Inferiority Complex of the Social Sciences" (1978d) was written to honour Mises, and Machlup (1978a: 306; 1978d: 338, n.7) acknowledges the influence of F. A. Hayek in the paper. It is an argument against *scientism*, the demand that methods used in social sciences be exclusively those used in natural sciences (1978a: 306). Machlup states that what distinguishes social from natural sciences is

the fact that *the student of human action is himself an acting human being* and therefore has at his command a source of knowledge unavailable to the student of the phenomena of nature. ...The close and unbreakable link between pre-

scientific everyday knowledge and scientific knowledge about the subject matter of social sciences is both an aid and a burden. It is an aid in that it furnishes the social scientist with an initial stock of experiences, working hypotheses, and interpretations of fundamental importance. It is a burden in that it saddles him with the obligation to work with constructs that are understandable to him and his fellow men in terms of their everyday experiences; that is to say, he is under the obligation to make his scientific constructs correspond in all relevant respects to the constructs that are used in everyday life in the common-sense interpretation of our fellow men's actions. (1978d: 342-3)

Note that Machlup presupposes a separation between pre-scientific *everyday knowledge* and *scientific knowledge*, and maintains that the former can produce only *working hypotheses* rather than validated theory. This critically compromises his objection to the methods of natural sciences being used in economics. I return to this point below.

Subjectivism is a central theme in Machlup's work, and the subjectivist "obligation" is expressed in a number of ways. Citing Hayek, he notes that in social science "man is both observer and subject of observation". Therefore the essential difference between natural and social science is

that in the latter the facts, the data of "observation," are themselves results of interpretations of human actions by human actors. And this imposes on the social sciences a requirement which does not exist in the natural sciences: that all types of action that are used ... be "understandable" ... in the sense that we could conceive of sensible men acting (sometimes at least) in the way postulated by the ideal type in question. (1955: 16-17)

Machlup draws this principle of *subjective interpretation* or *Verstehen* from Max Weber and Alfred Schütz (1955: 17; 1978b: 315).<sup>3</sup> Therefore each theoretical construct used "must pass the test of empathic understanding or imagined introspection; that is to say, it must satisfy the postulates of "subjective interpretation" and of "consistency with the constructs of commonsense experience"" (1978c: 185-6; quotations from Alfred Schütz). Note that it is only *imagined introspection*, a subtle touch which weakens the status of introspection, raising doubts by suggesting that its results are more imaginary than real.

Of the various interrelations between social scientists and their subject matter, the most important is that the investigator "cannot build useful constructs and theories in disregard of constructs and theories formed and communicated by men of the type he observes" (1978b: 323). This is carefully qualified: "While he may not completely disregard constructs and theories communicated by the subjects, he may contradict them for adequate reasons" (*ibid.*, n.26). Subjective or inner experience must be considered but cannot be taken as infallible. The understandability criterion is further qualified. Machlup's subjectivism does not take an inside or agent's-eye view but the observer's outside view. It is the *observer's* – not the *agent's* – understanding that counts: "This postulate requires the social scientist to ask what model of an individual mind can be constructed and what typical content must be attributed to it in order to explain the observed facts as the results of the activity of such a mind in an understandable relation". (1978b: 315)

Machlup repeatedly and forcefully insists on methodological subjectivism in economics. The exemplar is his defence of the marginalist theory of the firm (1946), in which his own business experience is used to account for executives' self-reports on their behaviour. Machlup's subjectivism can be summarised: (a) economists as participants have access to

intimate insights; (b) these insights are suggestive but provide only pre-scientific working hypotheses; consequently, (c) economists should take account of agents' own constructs; (d) theories should be subjectively understandable for the observer who can *empathise with or imagine* the agent's situation, but are not required to be faithful to the agent's understanding.

This is a pale imitation of the genuine subjectivism held by Austrians like Mises and Murray Rothbard, or indeed the British tradition culminating in J. N. Keynes and Lionel Robbins. Subjectivism is the defining characteristic of their economics, and this cannot be said of Machlup. For full-blown subjectivists our position as self-conscious subjects is the foundation of economics: (a) economists as participants have access to intimate insights; but (b) these insights are definitive and provide a source of privileged, scientific knowledge (whether the emphasis is placed on pure reason, intuition or immediate experience). Note that in this case Machlup's understandability criterion becomes superfluous since theory is grounded in subjectively understood principles. Genuine subjectivism generates methodological programs with four characteristics. (1) Methodological dualism: the phenomena and methods of economics differ distinctly from those of natural science. (2) Metaphysical realism: theoretical entities (like utility) are not convenient fictions but have objective existence.<sup>4</sup> The fundamental assumptions, because they are intimately known, are (3) established beyond reasonable doubt and (4) realistic, i.e. correspond faithfully to the facts of the case, and such realism is an important feature of theory. The key is the weighting given to subjective information. Real subjectivists hold that the knowledge gained by virtue of our place as economic subjects is more fundamental, more certain, more permanent and of greater significance than that gained by public observation. In contrast, Machlup's subjectivism is severely circumscribed by the presupposition that inner experience is not incorrigible and hypotheses formed from it are not scientific. As I show, Machlup's empiricism denies the subjectivist theses (2) to (4) and holds (1) very weakly.

## 2 Fritz Machlup's logical empiricism

Logical empiricism is an offshoot of logical positivism.<sup>5</sup> Logical empiricism has many similarities with Popper's falsificationism and with some latitude in interpretation the two can be reasonably well reconciled, as has happened in economics. Machlup's logical empiricism is exhibited particularly in his (1955, 1966 and 1978c).<sup>6</sup> Notably absent from Machlup's list of Austrian tenets (1982; cited above) is any reference to praxeology, the crucial tenet which separates Austrian from neoclassical theory. Machlup explicitly rejects the praxeology of his teacher Mises, which he calls *extreme apriorism*, denying that reason unaided by external experience can judge economic theory or that theory contains *a priori* truths (1955: 5-6, and n. 6). In return, Murray Rothbard defends Mises and condemns Machlup for denying praxeology. A praxeologist believes the fundamental principles are absolutely true because we have direct knowledge of them. The Fundamental Axiom – the existence of human action – is a self-evident truth known *a priori*, which “rests on universal *inner* experience, and not simply on external experience, i.e., its evidence is *reflective* rather than *physical*” (Rothbard 1957: 318).

Machlup is an empiricist: he denies that ideas gained from inner experience constitute scientific knowledge, and holds that subjectivist insights and first-person observations are prescientific and cannot validate economic theory. Only public, third-person observations can ground scientific knowledge; private, first-person observations can not. He rejects inner experience as a foundation for economics because such experience: “is not capable of being recorded from external (objective) observation; instead, it is immediate, inner experience. Hence, if verification is recognized only where the test involves objective sense-experience, the chief assumptions of economics, even if “empirical,” are not independently verifiable propositions” (1955: 6).

The thesis that fundamental assumptions cannot be independently tested comes from his view of theory structure, which is illustrated in a diagram of Machlup's reproduced below.<sup>7</sup> The vertical line divides the observable and empirically testable (left hand side) from the unobservable (right hand side). on the right is the "machine of pure theory," a mental construction for heuristic purposes", i.e. for making predictions. The heart of the machine is the Assumed Type of Action, the maximisation hypothesis. The analytical apparatus is "a construction of our mind" and the operations are mental ones. The theory is a construct which cannot be directly observed but links the observable input (the Assumed Change) and output (Deduced Change). It is possible to test the "correspondence with data" only for the Assumed and Deduced Changes (1955: 12-3).

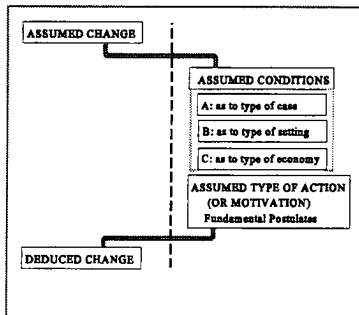


Figure 1 Machlup's Model of An Analytical Apparatus

For example, the theory of the firm (the fundamental assumption that firms maximise profits plus suitable auxiliary assumptions) can be used to link a change in product price (Assumed Change) to a change in quantity (Deduced Change): e.g. predict that if market price increases the perfectly competitive firm will increase output. While some auxiliary assumptions are observable (and hence testable), the fundamental assumptions contain terms with no direct empirical counterpart and cannot be observed even in principle. Such unobservable theoretical constructs linking two sets of observations are called *intervening variables*. Since they are not observable they cannot be directly empirically tested; if maximising cannot be observed one cannot use observations to test if maximising is taking place. Instead fundamental assumptions are tested indirectly by comparing their predictions (i.e., the *results* of maximising) with observation. Hence the indirect testability thesis: theoretical terms which are individually unobservable gain meaning through belonging to a theoretical system testable through its predictions. Validation is pragmatic - theories are valid if they work, i.e. make successful predictions.

Since fundamental assumptions cannot be directly tested against observation they cannot be "realistic", i.e. literally descriptive like a photographic image. The consequence is the Friedman-Machlup thesis that the realism of fundamental assumptions is irrelevant if the theory works. The maximisation hypothesis is a heuristic device and cannot be taken literally. Hence the Friedman-Machlup "as-if" formulation: changes in market outcomes are observed to be the same as those that would result if firms maximised profits; therefore changes can be predicted using a construct (called a "firm") which treats firms *as if* they maximised profits. The two Friedman-Machlup theses are usually associated only with Friedman. Friedman's behaviourist essay (1953) denies that theorists need take account of agents' consciousness. Machlup says of it that "the only serious flaw in the otherwise excellent essay" is that Friedman disregards the understandability requirement (1955: 17, n.42). That Machlup can endorse Friedman indicates how little weight Machlup actually attaches to subjectivism. He allows subjectivist concepts to be used as intervening variables but gives them the status of useful fictions which are valid only if theories using them generate successful predictions.

The maximisation assumption cannot be taken as a description of actual behaviour and has no direct relation to any kind of observation - even self-reports; therefore no observations are directly relevant to its appraisal. Machlup emphatically rejects the thesis that introspection or self-reports constitute verification or "'objective' evidence" by which

the assumption of "maximising behavior" is independently testable. [For] such a test would be gratuitous, if not misleading. For the fundamental assumption may be understood as an idealization with constructs so far removed from operational concepts that contradiction by testimony is ruled out; or even as a complete fiction with only one claim: that reasoning *as if* it were realised is helpful in the interpretation of observations. [Footnote.] Or, ... a resolution to proceed in the interpretation of all data of observations *as if* they were the result of the postulated type of behaviour. (1955: 11, and n.34)

Machlup says that to suppose that executives' self-reports disprove the marginalist theory of the firm is to be subject to a "confusion between the "firm" as an organisation - a group of persons with a variety of objectives, somehow coordinated - and the "firm" as a pure construct in the analytical role of an intervening variable in the theory of prices, inputs, and outputs" (1978b: 322, n.24).

The theoretical "firm" has no literal or operational counterpart. Whatever is observed or reported about actual firms is irrelevant to the construct "firm" used to make predictions.

Recall that Machlup required theory to meet the criterion of *imagined introspection*. It is clear how far subjectivism has been emptied of content when one deals with the imagined behaviour of an imaginary firm.

### 3 The problem of self-reports

Machlup (1978b) states that the key difference between a social and a natural science is that only in the former do we have to deal - one way or another - with the problem created by self-reports (for the simple reason that the objects of natural sciences do not make self-reports). The social scientist must explain the relationship of self-reports to other data: are self-reports correct or false, and why? There is the possibility (which common-sense takes as a well-established fact) that self-reports can be - deliberately or otherwise - misleading, inaccurate or plain false. According to Machlup the economic scientist cannot take self-reports as self-evident, but must question them just like any other data.

Machlup (1946, 1955) defends the maximisation hypothesis against critics who argue that it is falsified by self-reports (e.g. Lester 1946). Machlup holds that agents must maximise and make the appropriate calculations to do so because everything else we know demands it, and economic behaviour makes no sense otherwise. Consequently when agents' self-reports apparently contradict theory it is the self-reports that must be false - it is the agents who get it wrong (not the economists). In short, a self-report tells us what agents *think* they do whereas economic theory tells us what they *really* do.

Machlup deals with the problem of contradictions between self-reports and marginal theory with a raft of complementary arguments. I deal with them under five heads: (1) theoretical constructs are unobservable; (2) self-reports and economic theory use different languages; (3) self-reports are simply incorrect because personal experience is too narrow; (4) self-reports are rationalisations; (5) self-reports are based on subjective experience and common-sense while economic theory is based on objective experience and abstract theorising.

(1) *Theoretical constructs are unobservable.* The implications of the logical empiricist view of theory have already been noted. Fundamental theoretical constructs like profit maximisation are so abstract as to be unobservable: there can be no contradiction between theoretical constructs and self-reports because they have no point of contact. The firm about which business executives report is not the "firm" of marginal theory.

(2) *Self-reports and theory use different languages.* Observers and agents not only have different experiences but express them in different languages which are not necessarily comparable. He states that "the most essential terms in which economists explain business conduct do not exist in the business man's vocabulary", but only "an inexperienced researcher" could therefore conclude "that the explanations are unrealistic or definitely false" (1946: 537).

(3) *Self-reports are simply incorrect because personal experience is too narrow.* Machlup argues that the economic phenomena most in need of explanation are unintended consequences of activities carried out within a large and complex system that is beyond the direct experience of any single participant; and unintended consequences cannot be observed by participants watching their own behaviour. Participants are thus unable accurately to identify and report the causes of these phenomena or the workings of the system as a whole. Their views are common-sense rather than scientific. Agents' self-reports are based on misinformation and are therefore false. Here is an ironic turn: the Austrian theme of unintended consequences is used to undermine the Austrian theme of subjectivism.

For example, commercial bankers' self-reports commonly deny that their activities create money and this conflicts with established economic theory. Machlup explains the

discrepancy: bankers are able to report only their own individual activities, whereas credit creation is a product of the system as a whole. "Thus, the banker does not know what he really does or brings about because he cannot observe it" (1978b: 321, n.23). Likewise "probably 999 out of 1000 persons working on the stock market do not really know what it does and how it does it" (1978b: 325). To explain evidence of prices equal to average cost, he argues that despite self-reports executives do not price at average cost as a deliberate strategy; rather, the system as a whole generates these prices because competition between firms drives prices to average cost.

(4) *Self-reports are rationalisations.* He turns to psychology, claiming that self-reports are "unreliable or at least incomplete" because they are rationalisations chosen for their plausibility in order to make the subject "understood (and respected)" (1946: 537). According to Machlup business persons are "anxious" to demonstrate to researchers that they conform to standards of fairness and so will try to give the answers that they believe researchers want to hear. Experienced researchers need in-depth interviews "to disentangle actual from imaginary reasons, and to separate relevant from irrelevant data". He rejects the self-reports on which Lester's (1946) criticisms were based as "hopelessly inadequate" (1946: 538). He says:

[O]ne should realize the dangers of attempts to use the utterances of business men as evidence against the correctness of marginal analysis. Business men's answers to direct questions about the reasons for charging the prices they are charging are almost certainly worthless. Every single fact or act has probably hundreds of "reasons"; the selection of a few of them for presentation to the inquirer is influenced by the prejudices or old theories which the informant had impressed upon him by school, radio, newspapers, etc. (1946: 544)

The implication is that self-reports are driven by irrational subconscious forces like anxiety and suppressed memory; they cannot be then be considered scientifically valid.

(5) *Self-reports are based on subjective experience and common-sense while economic theory is based on objective experience and abstract theorising.* The act of observation necessarily entails a fallible act of interpretation through some theoretical framework. Firstly, observers cannot naively accept self-reports as infallible data against which theory must of necessity give way: economists must interpret them just as any kind of observation must be interpreted. Secondly, and more critically, subjects cannot give infallible reports because they must interpret even while observing their own behaviour. Self-reports are necessarily based on some kind of theory about one's own activities, but it is unscientific, common-sense theorising. Self-reports record what subjects theorise about their own behaviour, and theories are liable to error. Machlup considers it a matter of fact that, in a complex field like economics, subjects' naive theories are mostly incorrect. Self-reports must be taken seriously as data, interpreted and explained, but they cannot be taken at face value. (Of course, taking self-reports at face value is a kind of interpretation - the naive decision to interpret *as is* - but for Machlup, an incorrect interpretation.)

Machlup creates a clear demarcation between common-sense and scientific theory, between the theory of an economic agent and the theory of an economist. There are two crucial differences. Firstly, their perspectives are private versus public respectively: common-sense theories are based on participants' subjective experiences, while science is based on disinterested, third-person reports from outside observers. As noted above, he considers that everyday experience is only "pre-scientific" and provides only *working hypotheses* (1978d: 342) which then must be empirically tested by public observation; and that inner experience does not constitute data for scientific testing (1955: 6). Machlup makes the limitations of "imagined introspection" explicit. Because a construct resulting from introspection is drawn

from human experience it is understandable but it is also idealised and "this unnatural isolation of one element from all the rest makes the construct definitely unrealistic" (1978c: 186). Machlup stresses that the fact that constructs are ultimately derived from inner experience does not make them "empirical", "realistic", "relevant" or "true".

A second difference is in the level of abstract theorising, naive versus sophisticated.

Alas, economics cannot be learned either by watching or by interviewing the people engaged in economic activities. It takes a good deal of theorizing before one can grasp the complex interrelations in an economic system. And this theorizing consists mainly in constructing ideal types of motivated conduct of idealized decision-makers and combining them in abstract models of interactions. (1978b: 325)

Understanding economic phenomena requires scientific methods and theorising with careful reflection on reports made by observers rather than participants. Since public observations are more reliable than private observations, and the scientific method more reliable than common-sense, economic theory is more trustworthy than self-reports and when self-report and theory conflict - as they often do - it is the self-report that is mistaken and the economist's theory that is correct.

#### 4 Conclusion

Machlup denies the implications of subjectivism. Genuine subjectivism is founded on our ability to directly experience and rationally comprehend the economic fundamentals. Genuine subjectivism holds (1) methodological dualism; (2) metaphysical realism; that fundamental assumptions are (3) established beyond reasonable doubt, and (4) realistic (with realisticness an important feature of theory). By comparison, Machlup holds that subjectivist insights are not merely unscientific but often irrational. (1\*) He subscribes to a methodological dualism so weak that it is practically ineffective. While stating that the subjectivist perspective sets economics apart from natural sciences he insists on using the empirical standards of natural sciences for economics: only third-person observations are used to test theory. (2\*) Machlup subscribes to instrumentalism, the polar opposite of metaphysical realism. Theoretical entities are not real, only useful fictions. (3\*) By denying the legitimacy of subjectivist insights Machlup destroys any basis for certainty. In his view neoclassical theory has proved reliable in practice, which is very different from ascribing to it Misesian apodictic certainty or self-evident truth. (4\*) Machlup holds that fundamental assumptions are not realistic and that their realisticness (or unrealisticness) is quite irrelevant. These views are shared by Friedman, the usual exemplar of positivism and instrumentalism (except for Machlup's reservations over understandability). A curious case then - an Austrian who supports Friedman?

Just as curiously, Machlup's position is substantially the same as Popper's methodology of economics (Popper 1957/61). Popper, like Machlup, draws a limited subjectivism from Hayek. But for Popper the fact that economic agents are subjects rather than objects creates no fundamental difference between economics and natural science. He proposes for economics the method of situational analysis: the observer constructs a model of the agent's problem and treats the agent as a problem solver. However, the observer's perspective and theories take precedence over the agent's. Any subjectivist insights the economist has are prescientific, and provide only working hypotheses which must be empirically tested by the attempted falsification of their implications. Subjectivist experience *per se* has no scientific warrant. The only legitimate way to assess theories is to test their

predictions against third-person observations. Because Popper does not also insist on subjectivist understandability his empiricist position is more defensible than Machlup's.

Machlup's ambivalence is evident. On one hand he insists that economic behaviour simply cannot be understood at all without subjective interpretation. On the other hand he also insists that introspection and self-reports being "'prescientific' or naive interpretations may be very poor clues to a satisfactory theory" (1978b: 324) and that behaviour is to be explained in the third-person rather than the first-person. He tries to insist on both subjectivism (the inside view: first-person reports are considered data) and empiricism (the outside view: only third-person reports are data). The result is a quasi-subjectivism which demands that theory be understandable, but which also denies the validity of first-person understanding and defines understandability exclusively in the third person.

This quasi-subjectivism attempts to synthesise two incompatible positions - subjectivism and empiricism - creating an inescapable tension. Economists are supposed to be able to understand actions of agents in terms of first-person observation, and yet all theory must be tested and assessed on the basis of third-person observation. Theorists must use the concepts and theories of the subject in their explanations but must also provide a third-person interpretation of what those concepts and theories are. Machlup, appealing to his Austrian heritage, calls this subjectivism; in the end, some other term would have avoided confusion. If Machlup really took subjectivism seriously his program would be incoherent. As it is, the tension is difficult to resolve but overall the priority is given to empiricism, and subjectivism is forced to fit the empiricist's Procrustean bed.

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## Notes

- <sup>1</sup> Unless stated otherwise, all italics in quotations are in the original and all references are to Machlup.
- <sup>2</sup> See also Redman (1991: 138, n.16) and Screpanti and Zamagni (1993: 196).
- <sup>3</sup> Both Weber and Schütz are associated with Vienna. Schütz, a close friend (1978a: x), is cited in Machlup (1936, 1939) and quoted in (1955, 1978b, 1978c and 1978d). It is significant that Schütz, along with Machlup, attended Mises's seminars (Screpanti and Zamagni 1993: 197).
- <sup>4</sup> See Mäki (1990).
- <sup>5</sup> Caldwell (1982, chs 2 & 3; 1987); Redman (1991, ch.2).
- <sup>6</sup> His logical empiricism is recognised by Hausman (1989: 119); see also Caldwell (1984: 95).
- <sup>7</sup> Machlup (1955: 13, fig.1). For easier presentation some wording has been taken from the diagram and included in the text.

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