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## THE OPINION RULE AND WITTGENSTEIN'S TRACTATUS\*

RALPH SLOVENKO\*\*

### INTRODUCTION

In a political sense we say that every man has a right to his opinion. In a deeper sense it is more accurate to say that no man has a right to an opinion unless he has good evidence for it. This was the logic of the early English law, which excluded "mere opinion"; i.e., a belief by a witness who had no personal knowledge of the subject about which he was called to speak. Having no personal knowledge to report, what the witness might conjecture, guess, or surmise was wholly irrelevant in the judicial inquiry. In this aspect, the opinion rule was merely a reflection of the basic requirement in the law of evidence that to be competent as a witness, a person must have personal knowledge of the issues involved in the case.<sup>1</sup> When a witness had personal knowledge of the affair, the early cases did not exclude the opinion and inference which he drew from his observations.

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\* WITTGENSTEIN, *TRACTATUS LOGICO-PHILOSOPHICUS* (London: Routledge and Paul, (1955)). "There can be no serious doubt that the most powerful and pervasive influence upon the practice of philosophy in this country [England and the United States] today has been that of Ludwig Wittgenstein." WARNOCK, *ENGLISH PHILOSOPHY SINCE 1900*, 62 (1958). Wittgenstein's *TRACTATUS* was published in 1919. He lived for a few years thereafter near Vienna, and was at the time in fairly close touch with, though never one of, the philosophers of the Vienna Circle. He was in England from 1912 to 1914, spending part of that period as a pupil of Bertrand Russell's at Cambridge. He returned in 1929 to Cambridge, where he spent the remainder of his life.

The *TRACTATUS LOGICO-PHILOSOPHICUS*, a work of impressive subtlety and power, consists of a succession of brief, often loosely connected paragraphs, but they are so impassioned and charged that the reader is sent from one to the next. The paragraphs are numbered, and hereinafter references are by the numbers alone. See Moore, *Wittgenstein's Lectures in 1930-33*, 63 *MIND* 1 (1954), 64 *MIND* 1 (1955); Britton, *The Portrait of a Philosopher*, *THE LISTENER* (1955); Feibleman, *Viennese Positivism in the United States*, 4 *TULANE STUDIES IN PHILOSOPHY* 31 (1955).

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1. "The function of a witness in court is to testify about the things which he knows, not what others have said nor what he may think about the matter. What the witness has heard is excluded as hearsay, what he thinks is excluded as opinion." Ladd, *Objections, Motions and Foundation Testimony*, 43 *CORNELL L.Q.* 543, 560 (1958). "The rule with regard to evidence of opinion originated in the same doctrine as that to which the rule against hearsay can be traced—every witness must be able to say that he had seen or heard that to which he deposes. He must have been an 'oyant' and 'voyant'." CROSS, *EVIDENCE* 338 (1958).

Later, the opinion-exclusion rule took a twist. It came to be applied to a witness who spoke from personal knowledge, but who in his testimony wittingly or unwittingly acknowledged the inferential process involved in knowledge.<sup>2</sup> These embellishments aroused the ire of the judges, who, in effect, admonished the witness: "Speak to the facts, we can opine for ourselves." The usual expression of the rule is that it is the province of the trier (judge or jury) to exercise opinions and reach conclusions in determining its verdict and the function of the witness is to state the facts.<sup>3</sup> The witness is to present only his sensory impressions, and the court is to draw the necessary inferences and form its own opinion about what happened.

The formula that the witness must furnish "facts" and not "opinions" is based on the assumption that "fact" and "opinion" stand in contrast and hence are readily distinguishable.<sup>4</sup> The formula has proven to be an awkward tool for regulating the examination of witnesses in those cases where the court was not aware that the basic assumption of the rule is an illusion. Applied strictly, the formula has resulted in a wholesale exclusion of testimony, although based on the witness' personal knowledge. Wigmore was led to say that the opinion rule "has done more than any other one rule of procedure to reduce our litigation towards a state of legalized gambling."<sup>5</sup> In the introductory note to the chapter of the American Law Institute's Model Code of Evidence which deals with opinion, the same condemnation is to be found: "The rules evolved in this country prohibiting a witness from stating in terms of inference relevant matters which he has perceived have been the source of numerous trivial appeals and many undeserved reversals. They are uncertain in phrasing and capable of capricious application."

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2. The opinion rule is "an historical blunder, for the early cases excluding 'opinion' meant a belief by a person who had personally seen and known nothing, and was therefore not qualified to speak; whereas the modern rule applies it to witnesses who have had personal observation as a basis for their inference." WIGMORE, *A STUDENT'S TEXTBOOK OF THE LAW OF EVIDENCE* 156 (1935).

3. "The opinion rule excludes statements of 'opinion,'" and "by opinion is meant knowledge which the witness possesses as the result of an inferential process." Michael & Adler, *The Trial of an Issue of Fact*, 34 COLUM. L. REV. 1224, 1462, 1469 (1934). See also 7 WIGMORE, *EVIDENCE* § 1917 (3d ed. 1940); Tyree, *The Opinion Rule*, 10 RUTGERS L. REV. 601 (1956). LA. REV. STAT., 15:463 (1950) provides: "Except as otherwise provided in this Code, the witness can testify only as to facts within his knowledge, and neither as to any recital of facts heard by him, nor as to any impression or opinion that he may have." (emphasis added.) See *State v. Cooper*, 223 La. 560, 66 So.2d 336 (1953).

4. "'Facts' is a very ambiguous word, although it is so constantly used as if it were clear." MOORE, *SOME MAIN PROBLEMS OF PHILOSOPHY* 306 (1953). Dickens (in *Hard Times*, reports Mr. Gradgrind as saying: "Now what I want is Facts. Teach these boys and girls nothing but Facts. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts; nothing else will ever be of any service to them. Stick to Facts, sir. . . . We hope to have, before long, a board of facts, composed of commissioners of fact, who will force the people to be a people of fact, and of nothing but fact." See FRANK, *FATE AND FREEDOM* 174 (1945). As Mammy Yokum in Al Capp's *Lil Abner* puts it, "Facks is facks!!"

5. 7 WIGMORE, *EVIDENCE* § 1929, at 27 (3d ed. 1940).

Let us back away from the problem in order to view it as a whole.<sup>6</sup> It is not entirely fanciful to see a similarity between the theory underlying the opinion-exclusion rule in the law of evidence and the world-view of the Cambridge philosopher Ludwig Wittgenstein.<sup>7</sup>

#### WITTGENSTEIN'S TRACTATUS

Wittgenstein's *Tractatus*<sup>8</sup> is the fountainhead of logical positivism with regard to its most important tenets.<sup>9</sup> In it, we learn that the world is finite and consists in a discrete number of facts.

Wittgenstein teaches that the facts constituting the world consist ultimately of certain kinds of elementary facts which are not further reducible to other ones. They are called atomic facts, and those which are composed of them, molecular facts. In correspondence to these two kinds of facts, two kinds of statements are assumed: atomic statements to express the atomic facts, and molecular statements to express the molecular ones. Just as the existence or non-existence of a molecular fact is determined by the existence or non-existence of its atomic constituents, the truth or falsity of a molecular statement is determined by the corresponding properties of the atomic statements; that is to say, each statement is conceived to be a truth-function of the atomic statements.

According to Wittgenstein, objects are fixed with regard to their nature. Each object has a fixed form.<sup>10</sup> Names (which are primitive signs) in propositions indicate objects in atomic facts.<sup>11</sup> "We make to

6. "It is so easy for those engaged in practice to forget that a theory lies behind their practice; and this lapse of memory has been erected into a principle, to the effect that all theories are impracticable. . . . From the speculations concerning being and knowledge which occupy the philosopher, to the immediate problems confronting judge and jury, seems a fairly far cry. Yet the fact remains that the more abstract a theory — if it has any validity — the wider its applicability. The higher we fly the greater our landing radius, and to be abstracted from concrete fact is to have a greater range over it.

"Every individual and every institution has an implicit philosophy, and those who are not even conscious of the existence of such a thing as a philosophy act dogmatically on the unconscious assumption of some philosophy which lies so deep in them that they would consider it (if they ever came to consider it at all) identical with the dictates of common sense. At least this is true of them to the extent to which their actions are not inconsistent. . . . [R]ecognizing your philosophy, is a matter merely of finding out where you are — always a good thing." Feibleman, Book Review, 23 TUL. L. REV. 427-428 (1949). See also CORNFORTH, IN DEFENSE OF PHILOSOPHY (1950); Slovenko, Book Review, 33 TUL. L. REV. 919 (1959).

7. The ontology and epistemology of the fact has a long history. Democritus, who is called the father of materialism, made the first comprehensive statement of the atomic theory. History, according to Aristotle, is concerned solely with brute facts and their sequence. See CHARLESWORTH, ARISTOTLE ON ART AND NATURE 21 (1957). In Leibniz's ontology, the monad is the central concept, and for him all reality is involved in the existence of individual monads one by one. See MARTIN, KANT'S METAPHYSICS AND THEORY OF SCIENCE 2 (1955). To the monads correspond the hard facts; as the monads are windowless so that brute facts live in splendid isolation. See PASSMORE, A HUNDRED YEARS OF PHILOSOPHY 356 (1957).

8. WITTGENSTEIN, TRACTATUS LOGICO-PHILOSOPHICUS (1955).

9. See AYER, LANGUAGE, TRUTH AND LOGIC (1936); WEINBERG, AN EXAMINATION OF LOGICAL POSITIVISM (1936).

10. WITTGENSTEIN, TRACTATUS LOGICO-PHILOSOPHICUS, ¶ 2.0141 (1955).

11. WITTGENSTEIN, *op. cit. supra* note 10, at ¶ 3.203.

ourselves," says Wittgenstein, "pictures of facts."<sup>12</sup> The process of making pictures to ourselves is the process of thought, and the elements of the thought-picture are combined so as to represent the objects in the fact. The principle of combination is the notion of logical structure upon which the theory of logical correspondence is founded. Objects combine together to make up atomic facts; names combine together to make up propositions. "In the atomic fact objects hang one in another, like the members of a chain,"<sup>13</sup> and to "the configuration of the objects in the state of affairs" corresponds "the configuration of the simple signs in the proposition."<sup>14</sup> The atomic proposition is a "concatenation" of names that refer to objects that constitute a fact. The way in which objects hang together in a fact and names hang together in a proposition is the logical structure. A proposition is able to represent a fact because it shares the logical structure of the fact it represents.<sup>15</sup> This logical structure, reflected in atomic propositions, is unalterable. A proposition shows forth a logical structure as soon as it is asserted. The logical structure exists whether or not what it represents exists. If that logical structure shown forth by a proposition agrees with the logical structure of some fact in the world, then that proposition is true. If not, the proposition is false. Truth or falsity is the correspondence of the logical realm with the material realm.

As Wittgenstein would have it, the picture of reality is a locked logical system. The world is whatever it is, and is not made into anything else by the circumstances surrounding our perception of it. There is a world to be known which is no different for being known. The subject is eliminated, and the relation studied is that between a real world and a real system, not between a knower and a known. The world consists in a set of knowable facts which are eminently capable of isolation and systematic representation.

The purpose behind the *Tractatus* is to show the relationship between language and reality. According to the *Tractatus*, it is possible for a proposition to represent a state of affairs in the world outside language because it possesses the same logical structure as the fact it represents. The logical structure of elementary propositions is shared with reality. Complex propositions are combinations of elementary propositions. The *Tractatus* finds a determinable relationship between language and reality to lie in the nature of logical structure.

Wittgenstein's notion of logical structure is open to criticism. The notion was moulded by a pre-conceived and unexamined metaphysical

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12. WITTGENSTEIN, *op. cit. supra* note 10, at ¶ 2.1.

13. WITTGENSTEIN, *op. cit. supra* note 10, at ¶ 2.03.

14. WITTGENSTEIN, *op. cit. supra* note 10, at ¶ 3.21.

15. WITTGENSTEIN, *op. cit. supra* note 10, at ¶ 2.18.

empiricism of discrete and disconnected states of affairs.<sup>16</sup> Wittgenstein assumes, early in his work, that "atomic facts are independent of one another,"<sup>17</sup> and that the world is finite and consists in a discrete number of facts. Reasons for holding that reality is composed of atomic facts, however, are not to be found in the manifold of intuited data or in the interpretation of the manifold. On the contrary, evidence indicates the opposite and that there are no atomic facts. Observation and experiment have never yet revealed any atomic fact or simple object or event. When, so to speak, Wittgenstein's logical ship is launched upon the ocean of actual experience, it is found that the ship is so constructed as to be unseaworthy. The strict proposition in law that a witness on the stand must state nothing but the hard facts is unworkable because the rule forces upon the witness a debatable metaphysics and epistemology.<sup>18</sup> The hunt for brute facts is like the hunting of a shark — we must seek them "in some place unfrequented by man."

#### ANALYSIS OF DEDUCTION AND INDUCTION

The logician, as we know, customarily distinguishes between two kinds of argument, the deductive and the inductive. Neither of these two modes of argument, however, furnish justification for Wittgenstein's theory. In both the process of deduction (which goes from the general to the general or from the general to the particular) and the process of induction (which goes from the particular to the particular, or from the particular

16. The marxist philosopher Maurice Cornforth writes: "The atomism of Hume's philosophy, which was recently taken up and further systematised in the system of 'logical atomism', corresponded in no way with philosophical truth. But it did represent the reflection, in philosophical theory, of the economic position of the individual in capitalist society—a position the real nature of which was not understood, and which was reflected in this fantastic theory of the nature of the world." CORNFORTH, *SCIENCE & IDEALISM* 256 (1947).

17. Wittgenstein, *op. cit. supra* note 10, at ¶ 2.06.

18. The distinction which is made in law between "fact" and "opinion" supposes that one is certain and sure, the other not. This is the basis for the position held in some quarters that judicial notice is taken of facts which are "indisputable", and since judicially noticed facts are indisputable, the door is closed to the presentation by the adversary litigant of contrary evidence. See *Varcoe v. Lee*, 180 Cal. 338, 181 Pac. 223 (1919) (the test for judicial notice is: "Is it certain and indisputable?"); McCormick, *Judicial Notice*, 5 VAND. L. REV. 296, 318-323 (1952); Morgan, *Judicial Notice*, 57 HARV. L. REV. 269, 285 (1944). This position is theoretically justified only if the world is composed of atomic parts, and that one and only one analysis of a situation is correct. It is to be remembered that only the theorems of a mathematical or a logical system are certain because those principles are not about anything; they may be applicable to experience but they are not about experience. See Lee, *Theoretic Knowledge and Hypothesis*, 57 PSYCHOLOGICAL REV. 31 (1950); Slovenko, *Establishing the Guilt of the Accused*, 31 TUL. L. REV. 173 (1956).

The theory of the hard facts also finds expression in law in such concepts as "nuisance per se" and "inherently dangerous instruments". See Slovenko, *Natural and Positive Law as Viewed from General Value Theory*, 10 J. LEGAL ED. 47, 53 n. 24 (1957). On the fact-opinion dichotomy in the law of insurance, see Magaw, *Representations in the Law of Life Insurance*, 12 TEMP. L.Q. 55 (1937); PATTERSON, *CASES AND MATERIALS ON THE LAW OF INSURANCE* 543, 564 (3d. ed. 1955). On the role of "facts" in administrative law, see Dickinson, *Crowell v. Benson: Judicial Review of Administrative Determinations of Questions of "Constitutional Fact"*, 80 U. OF PA. L. REV. 1055 (1922); Comment, 66 HARV. L. REV. 1065, 1066 (1953).

to the general), a reason is presented and a conclusion is proposed; the difference between deduction and induction lies simply in the connection between the reason and the conclusion. Deductive inference is a progressive judgment or acceptance of propositions, proceeding from certain ones to others which they imply.<sup>19</sup> In the deductive argument, it might be pointed out, we have a set of one or more statements that are called premises, which are set forth as the basis for a conclusion which follows necessarily from the premises. Thus, where a proposition *p* is accepted as true, and it is also accepted as true that *p* implies *q*, then *q* can be accepted as true; for by the nature of the relation of implication, *q* cannot be false when a proposition that truly implies it is true.

In the inductive argument, the set of one or more statements is called the evidence for the conclusion. The inductive argument makes a claim that the evidence is sufficient to make the conclusion, at the very least, more likely to be true than false. In the inductive process, a set of evidentiary facts cumulatively point to a certain conclusion.<sup>20</sup> An inference from this evidence is not deductive. Inductions are probability-inferences. The conclusion is not that the set of facts entails *q*; it is that they make the truth of *q* probable. Hence *q* may be false, notwithstanding that the facts are as reported. The formal distinction between inductive and deductive inference consists in the fact that the conclusion of an inductive inference may be false although the premises are true; whereas, the conclusion of a valid deductive inference cannot be false provided that the premises are true. In a valid deductive argument the truth of the premises is a guarantee of the truth of the conclusion; the premises and conclusion are so related that it is absolutely impossible for the premises to be true unless the conclusion is true also. On the other hand, the reason that the conclusion in the inductive process can be false is because the inference goes beyond the evidence. We cannot absolutely arrive at the truth of a conclusion by an inductive inference, even though the evidence is true, because we only have *some* evidence for the conclusion; but we can establish some other value in the conclusion, namely, probability, by virtue of its relation to the premises. Inductions are probability-inferences rather than truth-inferences. For example: In asserting that *some professors are intelligent*, we do not always intend to assert that *only some* are. The evidence may be sufficient only to justify the assertion about *some*; nevertheless, the universal assertion might be in fact true, or then again it might be false. The assertion that *some professors are*

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19. Mathematics is perhaps the only science that makes appeal entirely to the deductive process.

20. In some cases, a single instance is sufficient for a complete induction, while in others, myriads of instances go a very little way towards establishing a conclusion. See 3 MILL, *Loc. cit.* ch. 3 (1864).

*intelligent* is compatible with the assertion that *all professors are intelligent*.<sup>21</sup>

In both deductive and inductive thinking, the thinker passes from something given — the datum — to something which he accepts because he has accepted the datum. It is a passage of thought from datum to conclusion. The conclusion, as the result of an inference, is accepted upon the basis of the datum. In the court of law, the deductive or inductive inference to be drawn from the datum is to be made by the trier and not by the witness. This, it seems, was the purpose of the twist in the opinion rule in the law of evidence. It was to bar the witness from making the passage from the datum to the crucial conclusion.<sup>22</sup> However, it is essential to note that "premise" (the basis or datum of the argument) and "conclusion" are relative terms, because any proposition, depending upon its context, can be a premise in one argument and a conclusion in another.

The passage in deductive or inductive reasoning from the premises or evidence to the conclusion does not mean that there is a formal difference between fact and opinion. As Aristotle remarked, all fact (the datum) is opinion. If we wish, we can refuse to call any statement about reality a fact unless it has received a wide and high degree of corroboration. The distinction between the terms depends on a difference in the degree to which they are based on evidence and have been confirmed by evidence. Nevertheless, it remains true that what is called a fact — the datum — involves a subjective element. It is not, as Wittgenstein would have it, a "brute fact."

#### CONDITIONS FOR KNOWING

Plato, Aristotle, St. Thomas, Locke and Hume were probably correct in pointing out that sensation is the genesis of all human knowledge. Perception is based on sensation, but it is not enough to say that we know facts through sense perception.<sup>23</sup> Sensation alone is not enough to give us knowledge of fact.<sup>24</sup>

21. See BEARDSLEY, *PRACTICAL LOGIC*, ch. 7 (1950); COPI, *SYMBOLIC LOGIC* 2-7 (1954); EATON, *GENERAL LOGIC* 66-70 (1931); STEBBING, *LOGIC IN PRACTICE* (1954). The term "deductive" has been widely misused, as, for example, by Sherlock Holmes in the celebrated "Science of Deduction", in the opening chapter of *The Sign of Four*. The "who done it" was not deduced, but inductively inferred, from the evidence.

22. WIGMORE, *op. cit. supra* note 2.

23. Locke and Hume, and Mill, treat experience as though it were something assembled primarily for the mere purpose of cognitive mirroring of the world around the human body.

24. "The statement 'I hear an automobile' is not literally true — not unless 'automobile' is adequately and completely defined as a sort of a noise or sound, for that is what I literally hear. Neither is it literally true to say 'I see an automobile' — not unless an automobile is adequately and completely defined as a colored shape, for that is what I literally see. I think that an automobile is more than a noise or a colored shape, and I suspect that you do too. I would say that an automobile involves the way that the noise and the colored shape and a great many other things go together.



Conditions for knowing are memory and perception, feeling and will, attention and thought. These subjective elements are involved in the observation of the "facts" which form our datum. In knowing, we have reality primarily in view, and not the subject who knows. The scientist, for example, does not at all think about himself in knowing; he is absorbed in reality, and tries, as he says, to eliminate the subjective factor altogether. However, in science, no less than in every mode of experience, the subject is operative and cannot be eliminated.

We are all familiar with the differences in reports of witnesses in actual cases. Münsterberg's *On the Witness Stand* is a work of note on the psychology of testimony.<sup>25</sup> Münsterberg reports an automobile accident case wherein one witness testified that the road was dry and dusty while another witness stated that it had rained and the road was muddy. In another case, where it was essential to determine whether at a certain disturbance the number of guests in the auditorium was greater than the forty who had been invited to attend, Münsterberg states that there were witnesses who insisted that there could not have been more than twenty persons present, and others who maintained that they saw more than a hundred.<sup>26</sup> He points out that these were not cases of

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Among the relevant other things is what the automobile can do to me and what I can do to it. We have adequate perceptual knowledge of the automobile only to the degree that we can put all these things together even though some of them are not in the present field of sensation but only in sense imagery garnered from past sensation or anticipated in future sensation." Lee, *Fact and Knowledge* (unpublished ms. at Newcomb College, Tulane University, 1957).

"[M]y total sense-perception is the result of a fitting together of the data provided by the separate senses. But that fitting together is done in the course of the complicated integrative processes which take place inside my brain, when the impulses from the different senses are received. . . . [W]hat I am conscious of, is a whole integrated representation of my surroundings, in which the data derived from each sense have become blended, and have no longer any separate existence." CORNFORTH, *SCIENCE AND IDEALISM* 88-89 (1947).

25. MUNSTERBERG, *ON THE WITNESS STAND* (1927). In this work, Professor Hugo Münsterberg furnishes an instructive exposition of what may be termed "legal psychology". Although the articles contained in the book were first published in 1908, they have lost none of their timeliness, interest or helpfulness.

26. These and many more illustrations from actual cases are reported in MUNSTERBERG, *ON THE WITNESS STAND* (1927). A symposium on witnesses and testimony at trials and hearings appears in the 13 *JOURNAL OF SOCIAL ISSUES*, no. 2 (1957). See also BROWN, *LEGAL PSYCHOLOGY* (1926); BURTT, *LEGAL PSYCHOLOGY* (1931); Mechem, *The Jurisprudence of Despair*, 21 *IOWA L. REV.* 669 (1936); Riesman, *Some Observations on Law and Psychology*, 19 *U. CHI. L. REV.* 30 (1951); Slesinger and Pilpel, *Legal Psychology*, 26 *PSYCHOLOGICAL BULL.* 677 (1929); Wigmore, *The Psychology of Testimony*, 3 *ILL. L. REV.* 399 (1909).

Jerome Frank developed and elaborated the theme of fact-skepticism with increasing emphasis from *Law and the Modern Mind* in 1930, through *Courts on Trial* in 1949, and to *Not Guilty* in 1957, the year of his death. See Cahn, *Fact-Skepticism and Fundamental Law*, 33 *N.Y.U. L. REV.* 1 (1958); Traynor, *Fact Skepticism and the Judicial Process*, 106 *U. PA. L. REV.* 635 (1958). It has been customary in the history of philosophy for those who found no dogmatic or absolute certainty of his knowledge to become skeptics. It is essential to distinguish hypothetical or probable knowledge from skepticism, which doubts the possibility of knowledge. Science of the present time does not claim absoluteness or infallibility, or "iron laws of necessity". Science has changed its attitude from a philosophy of fixed laws to a philosophy of hypotheses. Hypotheses yield probable knowledge. Formally there is no essential difference between a scientific "law", "theory", and "hypothesis". The distinction

intentional deception or of mental disease. The witnesses were highly respectable persons who did not have the slightest interest in changing what they had observed. Moreover, these were cases in which every layman was prepared to give his impressions; these were not cases which demanded professional or technical knowledge.

*Memory and perception.* When contradictions arise, we generally suspect that the witness lies. We take for granted that if he is normal and conscious of responsibility he may forget a thing, but we do not believe that he could remember a wrong or different thing. The cross-examining lawyer is mostly dominated by the idea that a contradictory statement is the product of intentional falsification. This is a popular illusion against which modern psychology most seriously protests.

No time-machine has been invented to go into the past, and so, when we concede witnesses to be honest, we quite frequently make memory responsible for the differences in their testimony. Memory, of course, is trustworthy in proportion to the vividness of the experience and to its nearness in time. However, it is not enough to label differences in testimony simply as "illusions of memory." Differences may exist even before we begin to recollect. Our observations may differ because of differences in perception, association, judgments, and suggestive influences.<sup>27</sup> We do not all perceive the same thing, and our immediate absorption of the surrounding world does not have the same meaning to all of us. If this is true, then Wittgenstein's and the logical positivists' theory of the truth of propositions, "pictures of facts," and even the discrete nature of facts, is called into question.

Before we even begin to recollect, differences in the observations of witnesses arise with the perception of the circumstances. We may hear opposing parties in a civil suit testify as to the size and length and form of a street as it appeared to them, without realizing that the same street

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between them depends on a difference in the degree to which they are based on evidence and have been confirmed by evidence. In the broader, more fundamental use of the terms, all generalizations are theoretic and theory is hypothetical. See Lee, *Theoretic Knowledge and Hypothesis*, 57 *PSYCHOLOGICAL REV.* 31 (1950); Slovenko, *Establishing the Guilt of the Accused*, 31 *TUL. L. REV.* 173, 185 (1956); see also CORNFORTH, *THE THEORY OF KNOWLEDGE* 153 (1955).

The change in attitude of science at the beginning of the twentieth century from a philosophy of fixed laws to a philosophy of hypotheses does not preclude reliable knowledge as a basis for action. Knowledge need not be infallible to be genuine knowledge. Dialectical materialists acknowledge that the history of natural science is a history of discarded hypotheses, but, they add, to every scientific theory or hypothesis a corresponding objectivity exists which is absolutely true in nature. But, when is a law established in a "pure form"? The answer is that the examination is never finished. New evidence may become available at any time. Certitude in science is alien to the spirit of science. It does not regard its own findings as final. See NAGEL, *SOVEREIGN REASON* 304-306 (1954); Feibleman, *Viennese Positivism in the United States*, 4 *TULANE STUDIES IN PHILOSOPHY* 31 (1955).

27. By "suggestion", a psychologist means nothing abnormal or pathological. Moreover, it is not a symptom of weakness. A suggestion is any idea which takes hold of our consciousness in such a way that it inhibits and excludes the opposite attitude.

appears quite differently from different points of reference. Properties are dependent upon the frame of reference. According to the theory of relativity in physics, it is impossible to ascribe to a physical body any single, absolute mass, size, shape or date, for the reason that these qualities depend upon a particular frame of reference, of which there are as many as there are observers in the universe. These properties would be absolute only if there were a single, universal frame of reference, which does not exist. We each see a different street because of our different space-time locus.<sup>28</sup> It is true that the differences between what the sense-organs of one man detect and what the sense-organs of another man detect are in practice comparatively small, but the important point is that there are differences. A given thing looks different from every different point of view. What can be common to different men is the meaning of their observations, and meaning involves the activity of mind.<sup>29</sup> As Socrates pointed out in the *Theaetetus*, concepts are what we have in common in knowledge.<sup>30</sup>

*Feeling and will.* Physiological conditions (the states of sensory organs and the central nervous system) affect our knowledge. As Erich Fromm stated it, "environment is never the same for two people, for the difference in constitution makes them experience the same environment in a more or less different way."<sup>31</sup> José Ortega y Gasset in his *The Dehumanization of Art* discusses the effect of emotion on the events we witness. He writes:

28. See PARKER, *HUMAN VALUES* 4 (1931).

29. "[E]xperience has taught us to construct the 'real' shape from the apparent shape, and the 'real' shape is what interests us . . . But the 'real' shape is not what we see; it is something inferred from what we see . . . [T]he real table . . . is not the same as what we immediately experience by sight or touch or hearing. The real table . . . is not immediately known to us at all, but must be an inference from what is immediately known". RUSSELL, *THE PROBLEMS OF PHILOSOPHY* 15-17 (1912). "The Universal is therefore in point of fact the truth of sense-certainty, the true content of sense-experience." HEGEL, *THE PHENOMENOLOGY OF MIND* 152 (1931).

30. "Socrates: 'And so, Theodorus, we have got rid of your friend without assenting to his doctrine, that every man is the measure of all things—a wise man only is a measure; neither can we allow that knowledge is perception, certainly not on the hypothesis of a perpetual flux, unless perchance our friend Theaetetus is able to convince us that it is.'" DEMIOS, *PLATO SELECTIONS, THEAETETUS* 356 (1927).

As this paper will attempt to show, it is due to our interpreting the manifold of intuited data in terms of the same concepts that we can communicate with each other about perception; or in other terms, it is due to our selecting and grouping in the same ways. See SINCLAIR, *AN INTRODUCTION TO PHILOSOPHY* (1944); Lee, *Knowledge and Fact* (unpublished ms. at Newcomb College, Tulane University, 1957).

31. FROMM, *MAN FOR HIMSELF* 61 (1947). In a criminal case, the purpose of the proceeding seems to have been reached if the accused acknowledges in express words his guilt of the charge; and yet we have a certain distrust of confessions. The essential argument against the trustworthiness of confessions refers to possible promises or threats. There are also persons who make a false confession in order to exculpate others, and there are persons who, in the face of an unfortunate combination of damaging evidence, may prefer to make a false confession in the hope of leniency. But, in addition, there are untrue confessions which are given with real conviction under the pressure of emotional excitement or influences. The pessimist or psychotic, who feels guilt without real guilt, is capable of making a statement which is false but, at the same time, sincere. Moreover, modern psychology suggests that there is, in punishment, a glorification of the villain and his deed. History has often recorded the fantastic spectacle of the innocent voluntarily confessing to murder, putting their

A great man is dying. His wife is by his bedside. A doctor takes the dying man's pulse. In the background two more persons are discovered: a reporter who is present for professional reasons, and a painter whom mere chance has brought here. Wife, doctor, reporter, and painter witness one and the same event. Nonetheless, this identical event—a man's death—impresses each of them in a different way. So different indeed that the several aspects have hardly anything in common. What this scene means to the wife who is all grief has so little to do with what it means to the painter who looks on impassively that it seems doubtful whether the two can be said to be present at the same event.

It thus becomes clear that one and the same reality may split up into many diverse realities when it is beheld from different points of view. And we cannot help asking ourselves: Which of all these realities must then be regarded as the real and authentic one? The answer, no matter how we decide, cannot but be arbitrary. Any preference can be founded on caprice only. [Why is this? It would seem that we can have reasons for our preferences at least sometimes.] All these realities are equivalent, each being authentic for its corresponding point of view. All we can do is to classify the points of view and to determine which among them seems, in a practical way, most normal or most spontaneous. Thus we arrive at a conception of reality that is by no means absolute, but at least practical and normative.

As for the points of view of the four persons present at the deathbed, the clearest means of distinguishing them is by measuring one of their dimensions, namely the emotional distance between each person and the event they all witness.<sup>32</sup>

Neither sensation nor sense perception is a passive recording of "what is the case." Facts are the facts they are known to be only within a context—different context, different facts. It may be contended that the brute or hard fact in the illustration by Ortega y Gasset is a man's

own lives in jeopardy for a moment in the spotlight. The Black Dahlia murders in California, to cite just one example, produced a swarming legion of persons eager to confess to hideous crimes with which they could have had no possible connection. All of these people were not out of touch with reality. They were out of touch with the generally accepted report of reality.

On the ways in which our feelings and interests obstruct or distort, or facilitate, or even make possible, our understanding, the psychologists have produced innumerable books of very diversified quality. A convenient and very brief first introduction to the subject is COSTER, *PSYCHO-ANALYSIS FOR NORMAL PEOPLE* (1934). A considerably fuller study is BROWN, *PSYCHO-DYNAMICS OF ABNORMAL BEHAVIOR* (1940), which is much more readable than its somewhat alarming title suggests.

32. ORTEGA Y GASSET, *THE DEHUMANIZATION OF ART* 14-15 (1951). "Ortega y Gasset suggests that the whole truth about reality consists of the sum of all the actual and possible perspectives of reality—presumably of all existing and potential human and non-human creatures—just as 'a landscape is possessed of an indefinite number of perspectives, all equally veracious and authentic,' there being no absolute perspective. That suggestion can be helpful if qualified in two ways: First, we must note that the human perspective includes not only what our reason tells us but also our feelings; the 'secondary qualities,' and human values and ideals, must not be excluded. Second, neither reality nor the human perspective must be regarded as static, finished; reality, at least as we experience it, is constantly changing, growing." FRANK, *FATE AND FREEDOM* 314-315 (1945).

death, inasmuch as the wife, the doctor, the reporter and the painter all agreed that a man was dying. However, besides the possibility, however remote, that the man was not dying,<sup>33</sup> a conceptual element was included in the observed event.

*Attention and thought.* Sensation is the genesis of knowledge, but sensation alone is not adequate to give us knowledge. It is Kant's famous dictum that, although there can be no doubt that all our knowledge begins with experience, it does not follow that it all arises out of experience. Perception involves the interpretation of intuited data, and concepts are essential to perception of fact.<sup>34</sup> Perception of fact is the subsumption of intuited data under concepts. Concepts are involved even in the most sensuous knowledge.<sup>35</sup> We can know nothing whatever of any object or event except the concepts which apply to it. No matter what we say of an object or event, what we say consists in asserting that such and such a concept applies to it. Every word in every language, except perhaps proper names, connotes a concept. There are not only concepts of substantive things, but also concepts of qualities, actions, relations. "To give" is a concept, for it describes a whole class of actions. "This" is a concept, since it applies, not only to one individual thing, but to all things. Everything is a "this."<sup>36</sup> Nearly all the words to be found in the dictionary stand for concepts. Thus, not merely some knowledge, but all knowledge, is conceptual. Hence, from bare sensation, as such, no knowledge can arise. Concepts are not perceived by the senses, but are the work of the mind which compares, contrasts and classifies what the senses give it.

The manifold, it seems, is a continuum and is not made up of discrete parts.<sup>37</sup> As Bertrand Russell once phrased it, in examining Hegel's philosophy, "every apparently separate piece of reality has, as it were, hooks which grapple it to the next piece; the next piece, in turn, has fresh hooks, and

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33. Query: Did Socrates live? For a reminder that there is no such thing as a "definitive" biography, see GREEN, JEAN-JACQUES ROUSSEAU (1955).

34. Concepts are discrete, but the manifold of intuition is a continuum. Locke and Hume ran into difficulty by assuming that the materials of knowledge come to the mind ready made, each of its own nature, and that complex knowledge is a structure made by arranging, manipulating, and associating these simple ideas or impressions in a way analogous to that in which a building is made from bricks.

Kant was justified in his criticism and rejection of this view. Kant holds that the mind contributes form to the manifold of intuition before it is aware of objects of perception. However, the rigidity of Kant's categories should be rejected. There is no conclusive evidence to show either that concepts or that the subsumption of intuited data under concepts are determined by a rigid structure of the mind. See Lee, Fact and Knowledge (unpublished ms. at Newcomb College, Tulane University, 1957).

35. "[I]n order to know that experience corresponds to fact, we must be able to get at that fact, unadulterated with idea, and compare the two sides with each other . . . [S]uch fact is not accessible. When we try to lay hold of it, what we find in our hands is a judgment which is obviously not itself the indubitable fact we are seeking . . . In short, if we can know fact only through the medium of our own ideas, the original forever eludes us." Blanshard, *The Coherence Theory of Truth*, in CONTEMPORARY PHILOSOPHY 36-37 (Jarrett & McMurrin ed. 1954).

36. See HEGEL, *THE PHENOMENOLOGY OF MIND* 152-53 (1931).

37. "Experience presents us with a continuum of events, and yet thought demands clearly demarcated things to think about. The problem is one of how we can arrive at

so on, until the whole universe is reconstructed."<sup>38</sup> The world is a single unified whole; everything is connected or related to everything else. The so-called facts are always interpretations of a slice of the content in terms of concepts. "Things," "events," "persons" are selections from the continuum. The word "man" is a concept, and when we apply this word to intuited content, we cut off its relation from everything else.<sup>39</sup> If reality is continuous, and is not made up of discrete parts (as the *Tractatus* would have it), it is subject to interpretation in alternate patterns. There is no reason to suppose that only one coherent body of beliefs is possible. With one pattern of interpretation, we have one set of facts, but with a different system, we have a different set of facts.<sup>40</sup> Our ability to communicate is due to our selecting and grouping in the same way. In growing up, as we learn language, we learn a customary mode of interpreting the manifold.<sup>41</sup>

clear and distinct things as the subject of thought when what we have to start with is a continuum of either of events." WELLS, *PROCESS AND UNREALITY* 24 (1950).

"If facts were independent of analysis and discrete, then we would be involved in ontological atomism. Even if facts were of this nature, however, our knowledge of them is not, and there is no evidence that they are of this nature. Within our knowledge, there are no 'atomic facts'. Perception is a continuum, and the analysis of perception yields no evidence of its being based on a discrete series of events or facts. . . . [T]he evidence points the other way. Furthermore, it seems that modern researches in mathematics cast doubt on the possibility of the generation of a continuous series out of a discrete series, although there is no theoretic difficulty involved in generating a discrete series out of a continuum." Lee, *An Epistemological Analysis of Induction*, 2 *TULANE STUDIES IN PHILOSOPHY* 83, 93 (1953).

38. RUSSELL, *THE PROBLEMS OF PHILOSOPHY* 222 (1912). The following observation by Maitland is oft-quoted: "All history is but a seamless web; and he who endeavours to tell but a piece of it must feel that his first sentence tears the fabric." See Stone, *On the Teaching of Law Comparatively*, 22 *TUL. L. REV.* 158, 159 (1947).

39. See Lee, *Theoretic Knowledge and Hypothesis*, 57 *PSYCHOLOGICAL REV.* 31, 32 (1950). Although every event is connected with every other, we are able to consider only a limited set of data. What we do not take into account, we assume that we are entitled to ignore as irrelevant. Thus, in Ortega's example, in determining cause of death, we need not take into account the state of mind of the King of England.

"It was long ago pointed out by psychology that concrete perception always includes a reference to past experience. Perception of fact is an interpretation of what is immediately and irreducibly given in the activity of the senses and in imagery in terms of past experiences and future possibilities of action. Facts, in other words, always include a conceptual element. Facts mean something, both in reference to past experience and to future action, and meaning is conceptual. . . . The colors, shapes, and sounds in our experience are intuited, but these intuitions are never the whole of concrete adult experience. The concrete object of our perception is a tree or a telephone pole or juke box. These are perceptions of fact, and facts are always interpretations of intuited content in terms of concepts. 'Tree', 'telephone pole', 'juke box': these words name concepts." Lee, *Theoretic Knowledge and Hypothesis*, 57 *PSYCHOLOGICAL REV.* 31, 32 (1950). The reader is to be reminded that these observations are not about genetic psychology, but about epistemology.

40. See SINCLAIR, *AN INTRODUCTION TO PHILOSOPHY* (1944).

41. "Different cooky cutters can cut different patterns out of the same dough." PATTERSON, *ESSENTIALS OF INSURANCE LAW* 495 (2d ed. 1957). No one person, of course, ever devises his own set of interpretation. The main outlines of a standard interpretation have been built up gradually in the history of the race and modified and improved by successive generations. Our perceptions of fact are crystallized in language. In languages very different in origin and history from our own, as, for example, the Polynesian language, the perceptions of facts are noticeably different. See Lee, *Linguistic Reflection of Wintu' Thought*, 10 *INT'L J. OF AMERICAN LINGUISTICS*

This view of the world is precisely the opposite of that held by philosophers like Wittgenstein.<sup>42</sup> Hegel, Hegel's English disciple F. H. Bradley and W. Angus Sinclair, represent perhaps the most important opposition to the theory of the logical positivists that the world is made up of discrete parts. According to this school of thought, there are no "brute facts" independent of theories. In the language of Sinclair, what we know is always a wide situation within which is a sub-situation on which attention is concentrated.<sup>43</sup> There are no particular entities, only sub-situations within a larger situation. The most precisely localized experience is called a "thing"; an unlocalized experience is called a state of the self. Disagreement arises because men experience different parts of reality or the same parts differently grouped.<sup>44</sup> Errors are the results of knowing only parts of reality. Reality is defined as that from which we select and group in attention.<sup>45</sup> Sinclair presents a fanciful but not necessarily misleading analogy. Suppose that there are several persons seated in a room, each with a receiving set which is tuned to a different frequency. The sets have no adjustable tuning device, but rather have fixed tuning. Each person selects a different part of reality, and it is our selection which gives us the things which we perceive and think.<sup>46</sup> This is the situation in which all men are, in our daily life.<sup>47</sup> The reason that we have different experiences is not that each of us has a private and subjective picture, but that each of us picks out and attends to only a

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181 (1944); Lee, *Fact and Knowledge* (unpublished ms. at Newcomb College, Tulane University, 1957).

Walter Lippman has described the power of social "stereotypes." He says that thanks to them we live in a pseudo environment which inserts between us and our actual environment a body of pseudo facts. The fashionable stereotypes form our "culture". We pick out of our surroundings "what our culture has defined for us" as the true, significant facts. LIPPMANN, *PUBLIC OPINION* (1922). See FRANK, *FATE AND FREEDOM* 77 (1945).

42. WITTGENSTEIN, *TRACTATUS LOGICO-PHILOSOPHICUS* (1955).

43. See SINCLAIR, *THE CONDITIONS OF KNOWING* (1951), and his excellent primer on philosophy, *AN INTRODUCTION TO PHILOSOPHY* (1944).

44. Voltaire's *Zadig* is a healthy reminder that there is always another way. "There was a great struggle in Babylon, which lasted 1500 years, and which divided the empire into two stubborn sects: one claimed that it was necessary to enter the temple of Mithra only with the left foot; the other held this custom in abomination, and entered only with the right foot . . . Zadig hopped into the temple." VOLTAIRE, *ZADIG*, ch. 7 (1747).

During the last century, mathematicians showed that a whole system of geometry could be constructed on different axioms than Euclid used. A new system could be based on a different set of rules. "The fascists have brought about a similar change in politics. They carried to the logical limit the cult of power . . . Their system is consistent and self-enclosed. And because, once one grasps the premises, the new order is entirely coherent, it has enabled the fascists in every political situation during the last decade to act with unqualified success." MUMFORD, *FAITH FOR LIVING* 182 (1940).

45. See SINCLAIR, *AN INTRODUCTION TO PHILOSOPHY* 83 (1944).

46. According to this theory, language is not basically symbolic, as Wittgenstein in the *Tractatus* maintains, but is directional. By the use of language, we can hope to change the attitudes of the other person so that his selection from reality will be the same as ours. See SINCLAIR, *THE CONDITIONS OF KNOWING* (1951).

47. In actions at law a theory of the case is of the essence in the selection from the datum. See LLEWELLYN, *THE BRAMBLE BUSH* 48 (1951). But cf. Hubert, *A Louisiana Anomaly—The "Writ" System in Real Actions*, 22 *TUL. L. REV.* 459

part of the immensely rich and complex world in which we find ourselves, and one man's part is not the same as another man's part. Which scheme of selecting and grouping is the correct one? The answer is the one which gives the most unforced unity to the experience of men; in other terms, the scheme which makes life most orderly.<sup>48</sup> The true pattern of selection is the one which affords the more adequate and consistent general scheme for ordering and systematizing all of the available data. The parts of the manifold of intuited data that cannot be assimilated into our system are discarded as a dream, illusion or hallucination.<sup>49</sup> It is the failure of our dreams to form a consistent whole either with each other or with waking life that makes us condemn them. Sinclair writes:

[I]n knowledge we are 'selecting' and 'grouping' some small scraps of the fast mass of influences that surround us, being driven on to do so by our emotions, feelings, impulses, and interests. We are doing so, or trying to do so, in the simplest and most coherent ways available, but our search for the most simple and coherent ways is perpetually obstructed or reinforced by our emotions, feelings, impulses, and interests, mostly without our recognizing them, so that on the whole we tend to 'select' and 'group' in ways which fall between two extremes, on the one hand the most simple and coherent, and on the other hand the most comfortable.

(1948). The objection to the "Theory of the Case Doctrine" has been that it has required the party to adhere to the theory of the case which he has elected. See Hubert, *Techniques Used in the Revision of the Code of Practice*, 33 TUL. L. REV. 153, 157 (1958).

"The selective process is perhaps most conspicuously shown by the way in which we give an account of any incident. In telling a friend about some happening, we do not pay attention to everything that occurred at the time and place in question, but only to a very small selection which we happen to think important or significant or interesting. This is why it is so often said that a good story-teller is a man who knows what to leave out. In other words, he does his selecting in a very careful and artistic way. He differs from the incompetent story-teller not by selecting, but by the way in which he selects. Everybody has to select. Even bores have to select. They cannot tell you everything that occurred. Human life is too short. Unfortunately they persist in selecting for attention — for their own attention and unfortunately for ours also — only exasperatingly trivial things. Bores are not necessarily the people who talk most. They often do not talk as much as interesting people, but they seem to talk more because they select such uninteresting things to talk about." SINCLAIR, *AN INTRODUCTION TO PHILOSOPHY* 92-93 (1944).

48. Plato said that the aim is to divide things by classes "where the natural joints are"; and he employs the image of a man carving meat who seeks the easiest way to divide it by not trying to break any part. *Phaedrus*, at 265E. Plato was thinking in terms of biological genera and species, and he generalized the notion to all classes and objects. See Feibleman, *On the Topics and Definitions of the Categories*, 4 PHIL. Q. 45 (1954).

49. Knowledge or perception of fact is not to be identified with the fact. The fact is what the knowledge or perception is *about*; it is the object of perception. Dreams and hallucinations are thus not perceptions of fact, for the fact is not there. However, the only evidence that the fact is not there is logically ordered theoretic evidence. "The economy of experience is attained by having numerous wastebaskets at hand into which we throw those parts of the manifold of intuited data that cannot be assimilated into theoretic knowledge. We label the waste-baskets 'dream', 'illusion', 'hallucination', and so on, and use them freely. I suppose that the bulk of the manifold of intuited data goes into the discard, and what we call a sane, well-adjusted person is one who uses the waste-baskets freely and who is not bothered by what he discards." Lee, *Fact and Knowledge* (unpublished ms. at Newcomb College, Tulane University, 1957).



Just how far they fall towards the one extreme or towards the other depends on what sort of persons we are, and on what sort of persons we would wish to be.<sup>50</sup>

The method of science serves to discredit the position of the *Tractatus*. The logical positivists are suspicious of conceptual thinking and want to replace it wholly by the manipulation of facts. They hold that a rigorous description of all nature can be pieced together, like a gigantic tinkertoy, out of small units of facts, each of which can be separately verified to be so. Science, however, is not the simple recordation of impersonal events. Scientific theory is not a mere collection of facts.<sup>51</sup> Science is not a mechanical record but a creative activity.<sup>52</sup> Basic scientific research, as well as art, poetry and painting,<sup>53</sup> requires creative, selective and disciplined imagination. The history of the development of modern science points away from the conclusion that there are atomic facts.<sup>54</sup> Professor Nagle writes:

A theory is never uniquely determined by any set of empirical data, however numerous and varied these may be. Alternate explanations are always possible in principle; and the supposition that a unique explanatory principle is embedded in the phenomena, and shines

50. SINCLAIR, AN INTRODUCTION TO PHILOSOPHY 138 (1944). See also HEGEL, THE PHENOMENOLOGY OF MIND (1931); MARCUSE, REASON AND REVOLUTION (1941).

51. Albert Einstein himself acknowledged his debt to philosophers of science—Ernst Mach in Vienna, Henri Poincaré in Paris, and the first and greatest skeptic about our habits in and outside science, the eighteenth-century British philosopher, David Hume.

52. The dialectical materialists raise the question, does science develop as a superstructure? "No, but the preconceptions forming part of the superstructure do enter into science and influence its development. They influence its development either positively or negatively, assisting scientific discovery or hindering it—just as, in general, the economic basis of property and class relations may be favourable or unfavourable to the further development of science." CORNFORTH, THE THEORY OF KNOWLEDGE 127-128 (1955). "[I]n bourgeois science, discoveries are always being interpreted—with the help of philosophers—in terms of the bourgeois preconceptions. We can see this happening today, for example, in the development of physics, where the discoveries of quantum physics are interpreted as meaning that events are unpredictable and their real nature unknowable." CORNFORTH, *op. cit. supra* at 92-93.

The difficulty with the position of the dialectical materialists is that it fails to recognize that scientific and philosophical generalities are discoverable only by *observation directed by theory*. Without a theory, as Whitehead has pointed out, "it is impossible to know what to look for"; without a theory we cannot know what, among all that is given, is relevant: "the relevance of evidence depends upon the theory which is dominating the discussion." WHITEHEAD, ADVENTURES OF IDEAS 283-284 (1933); see also Lee, A Criticism of the Marxian Interpretation of History, 1 TULANE STUDIES IN PHILOSOPHY 95 (1952). How do we come by the theory which is our "hypothesis"? When do we derive it? According to Whitehead, it is ultimately by "direct insight" into the nature of our datum, "the actual world, including ourselves": "We can only appeal to our direct insight—to what Descartes termed, our *Inspectio*. Our Judgement, that is our *Judicium* to which Descartes also appealed, requires an *Inspectio* to provide the material from which decision arises." WHITEHEAD, MODES OF THOUGHT 103 (1938). An expression that originated in Plato's school is that an hypothesis in natural science must "save the appearances", that is to say, natural science must take account of all the data of experience and do justice to them. See Lee, *Scientific Method and Knowledge*, 10 PHILOSOPHY OF SCIENCE 67, 69 (1943).

53. "The artist reorganizes nature according to his feelings and ideas." LEEPA, THE CHALLENGE OF MODERN ART 33 (1949).

54. See Lee, *Theoretic Knowledge and Hypothesis*, 57 PSYCHOLOGICAL REV. 31 (1950).

forth to the attentive intellect, is therefore radically mistaken. It follows that scientific research is not passive beholding and codifying of self-evident structures in things. On the contrary, the construction of theories, like the construction of works of art, makes serious demands upon powers of imagination and invention. Scientists have repeatedly noted the 'free creation of concepts' embodied in their theoretical foundations. As one of them has remarked, the work of Newton, Leverrier, Maxwell and Hertz 'was an expression of their personality just as surely as the work of Giotto, of Shakespeare, or of Bach.' This does not mean that the scientist is a demiurge who creates the things he studies. It does mean that an explanatory theory is but one among several possible techniques for representing and analyzing systematically an indefinitely large set of specific processes.<sup>55</sup>

Professor F. S. C. Northrop writes:

One cannot deduce the theories of science from the facts. Instead, the logic of deduction in scientific method runs in the opposite direction. One deduces the facts from the theory . . . In other words, our theories imply the facts which we observe, but the facts do not imply the theories.<sup>56</sup>

Similarly, Professor C. I. Lewis has pointed out: "The tendency to forget that initial concepts are never merely dictated by empirical findings is precisely what accounts for the absurd prejudice — now happily obsolescent — that science is 'just the report of facts.'"<sup>57</sup>

55. NAGEL, *SOVEREIGN REASON* 304-306 (1954).

56. NORTHROP, *THE MEETING OF EAST AND WEST* 204-205 (1946).

57. LEWIS, *MIND AND THE WORLD-ORDER* 6 (1929). See also PEARSON, *THE GRAMMAR OF SCIENCE* 104 (1892); Bronowski, *Science and Human Values*, 183 *THE NATION* 550 (1956); Lee, *A Criticism of the Marxian Interpretation of History*, 1 *TULANE STUDIES IN PHILOSOPHY* 95 (1952).

Professor Morris Cohen has stated: "The notion that science deals only with the observation of facts originated during the Renaissance and was expressed most emphatically by Francis Bacon, who is still revered as the 'father of scientific method' by those who pride themselves on following the inductive rather than the deductive method. Bacon's view rests on the assumption that the observation of facts is a simple process of mere recording. Actually, however, the determination of what the facts are is the end rather than the beginning of enquiry. Every enquirer must begin not with a *tabula rasa* for the recording of fresh facts, but with a fund of information. Discoveries in nature are not made by those who follow Bacon's precept and rid themselves of all anticipations of nature. The man who knows nothing about the subject may be free from all bias but he will not discover anything. The facts of nature do not stream into empty minds.

"But while previous knowledge is necessary, it is not sufficient for the observation or discovery of new facts. We need ideas or hypotheses. It is only when we have an hypothesis that we have something to look for. Without ideas, nature is one big blooming confusion. The child begins, not with the observation of particulars, but with vague images. The child does not begin by seeing apple trees, chestnut trees, and others, and then generalizing. On the contrary, it takes considerable reflection and critical observation before the individual object is recognized for its specific qualities. Over two thousand years ago, Aristotle called our attention to the fact that an infant calls every man 'father', and it certainly takes time before he distinguishes his father from other men.

"Recognizing this intellectual element in perception, we can see that science is not a knowledge of mere particulars, but rather a knowledge of the way in which

This approach seems to have the effect of making the real world structureless, and its objects dependent on individual minds, but actually under this view the real world may or may not have structure. What we know, according to this position, depends on our ways of selecting and grouping in our attention. This position may alienate those persons who are attempting to find a more objective ground for epistemology, for it turns the question of what we know into one of attitudes.<sup>58</sup>

### CONCLUSION

The purpose of this discussion has been to inquire into the presuppositions of the opinion rule in the law of evidence by examining two alternate ways of looking at the world.

If we accept the position of the *Tractatus*, then we can conclude that the court is theoretically correct in the dichotomy which it makes between fact and opinion. According to this position, the witness, if he is trustworthy and normal, reports the one and only one picture of reality which is possible.<sup>59</sup> Differences in reports arise only when the witnesses either speak of *non-sense* (in the literal sense of the word) or form complex propositions. It is not grotesque to see an analogy between the complex propositions in the *Tractatus* and the taboo "opinion" in the court of law.

On the other hand, if we take the position that reality, whatever it is, is not composed of discrete parts but is a continuum from which we select and group in our attention, then we can conclude that the court is not theoretically correct in its distinction between fact and opinion because, under this theory, we say that every observation is an opinion.

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classes of things are related. . . . The fundamental fallacy of positivism is the assumption that facts of physical perception are in themselves definitely determinate. . . .

"The essence of the fallacy is the assumption that the facts constitute the starting point of inquiry, whereas they are the ends to be achieved by inquiry. The progress of science consists in formulating hypotheses based upon the best available knowledge and anticipating new situations which can be experimentally brought into being so that greater determination can be achieved." COHEN, A PREFACE TO LOGIC 170-171, 182 (1956).

58. "We speak of 'objective' reality, which we distinguish from our 'subjective' impressions. But we seldom note that 'subjectivity' has two different categories. The first consists of the individual's subjectivity: a particular man may claim to see or hear things not seeable or hearable by the great majority of men; the notions of such a man, out of step with the generality of mankind, are 'subjective' — peculiar to him — while those generally accepted we class as 'objective'. The second kind of 'subjectivity' all men share: the common inability of all mankind, because of man's limited sense organs and intellect, to perceive or be sensitive to all that may be happening in the universe, or to perceive or be sensitive to certain happenings except in certain limited ways. That second type of subjectivity cannot be eliminated." FRANK, FATE AND FREEDOM 312-313 (1945).

59. It should be noted that, even if there were atomic facts, as Wittgenstein claims, this would not be sufficient to show that one and only one analysis of a molecular statement is correct. The possibility of alternate molecular groupings of the atomic facts renders possible alternate analyses of the apprehended situation.

It is to be remembered that theoretical accuracy and efficiency are very different things.<sup>60</sup> In spite of the continuum theory, the opinion rule may be justified on one or perhaps two pragmatic grounds. As Bishop Berkeley put it, we should speak with the vulgar but think with the learned. By this, Berkeley means to say that we should use the kind of language which our listeners can understand, for language is for the purpose of communication, but that we should know the meaning of our language even though our listeners do not. First of all, the opinion rule serves to convey in ordinary language the needed admonition to the witness that he is to refrain from mere gratuitous imagination and conjecture, and this purpose of the rule is commendable. It eliminates testimony about matters of which the witness has no personal knowledge.<sup>61</sup> Secondly, and less important, the opinion rule warns the witness in ordinary language that it is the function of the tribunal to draw from the data the crucial evaluation or ultimate inference (as determined by the case on trial).<sup>62</sup>

However, when a rule as formulated is in the final analysis devoid of meaning, those who attempt to apply the rule as formulated invite disaster unless the meaning of the language is understood. The court runs into trouble when it expects a witness to reproduce the sensory impressions he received when he observed an event. As we have shown, there is no epistemological or ontological justification for the fact-opinion dichotomy. As soon as we come to analyze the terms "opinion" and "fact," we find that the distinction vanishes, and that what we choose

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60. "If we took six months over every case that now takes six hours to try; if we curried the life of every party and witness with a fine comb; if we ran down every clue and shred of evidence; if we subjected parties, witnesses and even prospective jurors to full medical, sociological, and psychiatric examination—we should undoubtedly emerge with more accurate and efficient answers. Whether the answers would also be more truthful is another matter. Truth and efficiency are very different things, and our problem is that of all free people—to establish enough truth, by a consensus of instinct, to satisfy the group that in general there has been fair play." Box, *PROBLEMS IN CRIMINAL LAW* 10:11 (1955).

61. If a witness has had a hazy perception or if his recollection has been dulled over a period of time, it would be much easier for the witness to testify in terms of inferences than to give a detailed account. The opinion objection, which would require the witness to testify with more detail, has value in such a situation as it would reveal the witness' hazy perception or dull recollection. It should be noted, however, that where the witness has a sharp recollection of the event, the exercise of the opinion objection may only help opposing counsel to build his case more forcefully. If the objection is urged and sustained, the examiner rephrases the question to draw out testimony which may be much more informative and effective than the original testimony. To urge the opinion objection may simply result in the witness giving an expanded and detailed narrative of the incident which will be more convincing to the jury. These observations are made by Professor Mason Ladd in *Expert Testimony*, 5 VAND. L. REV. 414 (1952).

62. There is no good reason why a witness cannot express an opinion on the ultimate question of the case. The law naively assumes that a witness who testifies on the ultimate inference will usurp the function of the court. A witness cannot usurp the function or invade the province of the jury, by his opinions, even if he wished to do so. The jury may accept it wholly, or in part, or reject it in toto. Rule 56(4) of the recommended *UNIFORM RULES OF EVIDENCE* (1953) provides that "testimony in the form of opinions or inferences otherwise admissible under these rules is not objectionable because it embraces the ultimate issue or issues to be decided by the trier of the fact." See note 66 *infra*.

to call "fact" is only well-attested "opinion."<sup>63</sup> Hard facts upon examination turn out to be soft. Every statement resolves itself into a matter of opinion. The contention that opinion is inference and that fact is original perception cannot be sustained, since the process of knowledge is the same for both. There is no statement however specific and detailed that is not in some measure the product of inference and reflection as well as observation and memory. A human being cannot behave as a mere "dataphone." It is impossible to confine witnesses to some fancied realm of "fact" and to forbid them to enter the domain of "opinion."

The terms "fact" and "opinion" denote merely a difference of degree of description or a difference in nearness or remoteness of inference. The difference between the statement, "he was driving an automobile on the left-hand side of the street," which would be classed as "fact" under the rule, and "he was driving an automobile carelessly," which would be called "opinion," is merely a difference between a more specific form of descriptive statement and a less specific form. The opinion rule operates to prefer the more primitive inferential statement, that is, to prefer the more descriptive statement to the less descriptive or evaluative statement (or what may be called *data secundum quid*).

As long ago as 1898 Thayer wrote: "In a sense all testimony to matter of fact is opinion evidence; i.e. it is a conclusion formed from phenomena and mental impressions."<sup>64</sup> Legal reformers are now becoming conscious of the theoretical unmeaningfulness of the opinion rule.<sup>65</sup> The American Law Institute's *Model Code of Evidence* condemns the development of the opinion rule. The rule now increasingly accepted is that the opinion of a witness will be permitted if it is the kind which persons form constantly and the witness cannot with reasonable facility describe more primitively the facts upon which the opinion is based.<sup>66</sup>

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63. The origin of the word "fact" is illuminating; it derives from the Latin "*facere*", which means "to make" or "do". A "fact" results from human selection, an abstraction, something "drawn off", separated out. See FRANK, *FATE AND FREEDOM* 175 (1945).

64. THAYER, *A PRELIMINARY TREATISE ON EVIDENCE AT THE COMMON LAW* 524 (1898).

65. Professor Maguire has stated: "Our whole conscious life is a process of forming working beliefs or opinions from the evidence of our senses, few of them exactly accurate, most of them near enough correct for practical use, some of them seriously erroneous. Every assertion involves the expression of one or more of these opinions. A rule of evidence which called for the exclusion of opinion in this broad sense would therefore make trials quite impossible." MAGUIRE, *EVIDENCE—COMMON SENSE AND COMMON LAW* 24 (1947).

66. See COWEN & CARTER, *ESSAYS ON THE LAW OF EVIDENCE* 162 (1956); Weinstein, *The Law's Attempt to Obtain Useful Testimony*, 13 *J. OF SOCIAL ISSUES* 6, 9 (1957).

Rule 56 of the recommended *UNIFORM RULES OF EVIDENCE* (1953) provides: "(1) If the witness is not testifying as an expert his testimony in the form of opinions or inferences is limited to such opinions or inferences as the judge finds (a) may be rationally based on the perception of the witness and (b) are helpful to a clear understanding of his testimony or to the determination of the fact in issue. (2) If the witness is testifying as an expert, testimony of the witness in the form of opinions or

It is to be remembered that the practical administration of justice sets limits on the detail which can be required of the testimony of witnesses.<sup>67</sup> Indeed, a description which is overly primitive or detailed does not assist the court in forming an accurate judgment. Thus, in the example given above, it would be pedantic and tedious to require the witness to describe in detail what he means by the concept of "automobile" or "street." It would not be fruitful to put the court in possession of more primitive statements upon which the witnesses' opinion is based.

The opinion rule should be used to facilitate procedure and to reach a fair result, and to this end it should be applied flexibly. It should neither be related to an inadequate epistemology, which may tend to invest it with a sense of inviolability, nor be expressed in such a manner as to force its users to accept, at least implicitly, an inadequate epistemology or an ontology of discrete fact.

inferences is limited to such opinions as the judge finds are (a) based on facts or data perceived by or personally known or made known to the witness at the hearing and (b) within the scope of the special knowledge, skill, experience or training possessed by the witness. (3) Unless the judge excludes the testimony he shall be deemed to have made the finding requisite to its admission. (4) Testimony in the form of opinions or inferences otherwise admissible under these rules is not objectionable because it embraces the ultimate issue or issues to be decided by the trier of fact." THE MODEL CODE OF EVIDENCE 401 accepts opinion testimony as the normal while this rule treats it as exceptional.

67. A trial is not an abstract search for truth, but an attempt to settle a controversy between two persons without physical conflict. "[T]he scientist is not much hampered, as the court is, by limitations of time and place. A scientist can wait till he finds the data he wants; and he can use past, present, and future data; and he can go anywhere to get them. . . . But a judicial trial must be held at a fixed time and place, and the decision must be then made, once for all," WIGMORE, A STUDENTS' TEXTBOOK OF THE LAW OF EVIDENCE 10-11 (1935).

"The methods of criminal detection are not at every point identical with those of scientific history, because their ultimate purpose is not the same. A criminal court has in its hands the life and liberty of a citizen, and in a country where the citizen is regarded as having rights the court is therefore bound to do something and do it quickly. The time taken to arrive at a decision is a factor in the value (that is, the justice) of the decision itself. If any juror says: 'I feel certain that a year hence, when we have all reflected on the evidence at leisure, we shall be in a better position to see what it means,' the reply will be: 'There is something in what you say, but what you propose is impossible. Your business is not just to give a verdict; it is to give a verdict now; and here you stay until you do it.' This is why a jury has to content itself with something less than scientific (historical) proof, namely with that degree of assurance or belief which would satisfy it in any of the practical affairs of daily life." COLLINGWOOD, THE IDEA OF HISTORY 268 (1956). We will do well to remember what Aristotle said centuries ago: "We must not look for the same degree of accuracy in all subjects; we must be content in each class of subjects with accuracy of such kind as the subject matter allows."

The need for reaching a decision is well illustrated by the case of *Radio Corporation of America v. United States*, 341 U.S. 412 (1951). For several years, the FCC considered the promulgation of a single set of standards for color television. RCA and CBS were conducting experiments in an effort to perfect their respective systems. RCA's plan, if it could be achieved, admittedly was both desirable from an economic and scientific standpoint. The CBS system, however, was nearer perfection when the FCC promulgated regulations which in effect adopted its scheme and precluded the RCA plans. The agency's determination came after years of testing, and at some point positive action had to be taken.