

Sherlock Holmes: Applied Social Psychologist

Sir Arthur Conan Doyle (1859-1930), best remembered as the creator of the fictional detective Sherlock Holmes, would have preferred to be remembered for his many other works, especially his historical writings and his defense of spiritualism.¹ He even attempted to discontinue Holmes's adventures by having him nobly killed in "The Final Problem" which Doyle published in 1893, but he found the great demand of the public for their hero enough incentive to bring Holmes back to life in 1904 to continue the saga.² The image of Holmes as epitomizing the application of rationality and scientific method to human behavior is certainly a major factor in the detective's ability to capture the world's imagination. The following article examines the value and application of Holmes's method in social psychology.

NOTES

1. Doyle's major works aside from the Holmes stories include: *The Captain of the "Polestar"* (1887); *The Mystery of the Cloomber* (1888); *Micah Clark* (1889); *The White Company* (1891); *Rodney Stone* (1896); *Sir Nigel* (1906); *The Lost World* (1912); *The British Campaigns in Europe* (1928); *The Great Boer War* (1900); and

History of Spiritualism (1926). Re Doyle's role as a spiritualist, a sympathetic account can be found in: Sherman Yellen, "Sir Arthur Conan Doyle: Sherlock Holmes in Spiritland," *International Journal of Parapsychology* 7 (1965): 33-57.

2. For a consideration of Holmes's more general perspective in relation to scientific method, see: Karl Kejci-Graf, "Sherlock Holmes, Scientist, Including Some Unpopular Opinions," *The Sherlock Holmes Journal* 8, no. 3 (Winter 1967): 72-78.

SHERLOCK HOLMES: APPLIED SOCIAL PSYCHOLOGIST*

THE REALITY AND RELEVANCE OF SHERLOCK HOLMES

In her remarkable survey of the history of the detective novel, Alma Elizabeth Murch has noted that:

There are in literature certain characters who have come to possess a separate and unmistakable identity, whose names and personal qualities are familiar to thousands who may not have read any of the works in which they appear. Among these characters must be included Sherlock Holmes, who has acquired in the minds of countless readers of all nationalities the status of an actual human being, accepted by many in the early years of the twentieth century as a living contemporary, and still surviving fifty years later with all the glamour of an established and unassailable tradition, the most convincing, the most brilliant, the most congenial and well-loved of all detectives of fiction. (Murch 1958, p. 167)

In all of English literature, it has been said that the only other three fictional names equally familiar to the "man in the street" might be those of Romeo, Shylock, and Robinson Crusoe (Pearson 1943, p. 86).

Although the Holmes saga consists of only sixty narratives¹ by Sir Arthur Conan Doyle,² which first appeared between 1887 and 1927,³ the foothold Sherlock Holmes gained upon the popular imagination has seldom been equalled. The depth of his impact is nowhere better demonstrated than by "the belief, held for years by thousands, that he was an actual living human being—a circumstance that constitutes one of the most unusual chapters in literary history" (Haycraft 1941, pp. 57-58). Thus, in addition to countless letters from troubled would-be clients addressed to "Mr. Sherlock Holmes, 221-B Baker Street, London" (a non-existent address, too) and many sent to him care of Scotland Yard, the announcement of Holmes's retirement to a bee-farm in a 1904 story brought two offers from would-be employees (one as a housekeeper, the other as bee-keeper). Doyle received sev-

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eral letters from ladies who had been contemplating possible marriages with Holmes (Lamond 1931, pp. 54-55) and there was even a gentleman (one Stephen Sharp) who believed himself to be Holmes, and he made several attempts to visit Doyle from 1905 onwards (reported by Nordon 1967, p. 205).

Aside from those who naively believed the Holmes legend, however, and much more sociologically significant, has been the fact that the "legend of Holmes's reality has been swelled by other enthusiastic if more sophisticated readers who know well enough that their hero has never lived in flesh and blood, but who like to keep up the pretense that he did" (Haycraft 1941, p. 58). More has probably been written *about* Holmes's character than any other creation in fiction, and it is remarkable that it is Holmes and not Sir Arthur Conan Doyle who has been the focus of so much attention. Thus, Holmes has been the subject for biographies,⁴ encyclopedic works,⁵ critical studies,⁶ and numerous organizations honoring and studying the Holmes character exist all around the world.⁷ Several movements have even been started to get a statue of Holmes erected near his alleged home on Baker Street.⁸ As Christopher Morley has often been quoted as saying: "Never, never has so much been written by so many for so few."

Apart from the delightful games of the Sherlockians and their playful mythologies, however, the character of Sherlock Holmes and his exploits touches a deeper reality, for, as has been noted, "this legend fulfills a need beyond the realms of literature" (Nordon 1967, p. 205). Though, as Pearson (1943, p. 86) has observed, Holmes symbolizes the sportsman and hunter, a modern Galahad hot upon the scent of a bloody trail, the character of Holmes even more clearly epitomizes the attempted application of man's highest faculty—his rationality—in the solution of the problematic situations of everyday life. Most of the plots of the stories came from real life events found by Doyle among the newspaper stories of the 1890s (Nordon 1967, p. 236), and remarkably few of the plots deal with bloody violence or murder. In fact, as Pratt (1955) has observed, in fully one-quarter of the stories no legal crime takes place at all. The essentially mundane character of most of the plots clearly demonstrates the observation that the "cycle may be said to be an epic of everyday events" (Nordon 1967, p. 247). It is this everyday setting of the applications of Holmes's "science" and rationality that so astounds and gratifies the reader. And it is not so much the superior ability of Holmes to obtain remarkable insights and inferences from simple observations which so impresses the reader; it is the seeming reasonableness and obviousness of his "method" once it has been explained to the reader.

One truly believes (at least while under the spell of the narrative) that Holmes's new applied science is possible for the diligent student of his "methods." As has been noted:

The fictitious world to which Sherlock Holmes belonged, expected of him what the real world of the day expected of its scientists: more light and more justice. As a creation of a doctor who had been soaked in the rationalist thought of the period, the Holmesian cycle offers us for the first time the spectacle of a hero triumphing again and again by means of logic and scientific method. (Nordon 1967, p. 247)

This fascination with the possibility of the mundane application of scientific methods to the interpersonal world has captured not only the imagination of the lay readers of the Holmes saga. It has had an appreciable effect upon criminologists and those concerned with the real life problems that parallel those fictionally encountered by Sherlock Holmes. Thus, a representative from the Marseilles Scientific Police Laboratories pointed out that "many of the methods invented by Conan Doyle are to-day in use in scientific laboratories" (Aston-Wolfe 1932, p. 328); the Director of the Scientific Detective Laboratories and President of the Institute of Scientific Criminology has stated that "the writings of Conan Doyle have done more than any other one thing to stimulate active interest in the scientific and analytical investigation of crime" (May 1936, p. x); and, most recently, an expert on firearms has argued that Holmes should be called "Father of Scientific Crime Detection" (Berg 1970). Many famous criminologists, including Alphonse Bertillon and Edmond Locard, have credited Holmes as a teacher and source of ideas, and Holmes's techniques of observation and inference are still presented as a useful model for the criminal investigator (Hogan and Schwartz 1964).⁹

In addition to the very practical consequences of Sherlock Holmes's influence upon modern criminology, the reality of his "method" is even better shown through an understanding of his origins. In his autobiography, *Memories and Adventures* (1924), Doyle clearly states that the character of Holmes was patterned after his memories of his professor of surgery when Doyle was in medical school, Joseph Bell, M.D., F.R.C.S., Edinburgh, whom Doyle recalled as capable of the kind of observation and inference so characteristic of Holmes. Bell's remarkable ability is well exemplified by the following anecdote related by Doyle:

In one of his best cases he said to a civilian patient: "Well, my man, you've served in the army." "Aye, Sir." "Not long discharged?" "No, Sir." "A Highland regiment?" "Aye, Sir." "A non-com officer?" "Aye, Sir." "Sta-

tioned at Barbados?" "Aye, Sir." "You see, gentlemen," he would explain, "the man was a respectful man but did not remove his hat. They do not in the army, but he would have learned civilian ways had he been long discharged. He has an air of authority and he is obviously Scottish. As to Barbados, his complaint is Elephantiasis, which is West Indian, and not British." To his audience of Watsons, it all seemed very miraculous until it was explained, and then it became simple enough. (Doyle 1930, p. 23)

It is likely, however, that Holmes was only partly patterned after Dr. Bell and is actually a composite of several persons.¹⁰ Ultimately, though, "there is no doubt that the real Holmes was Conan Doyle himself" (Starrett 1960, p. 102). As Michael and Mollie Hardwick have shown in their remarkable study *The Man Who Was Sherlock Holmes* (1964), the parallels in Doyle's life, including the successful solution of several real-life mysteries and Doyle's championing of justice (best seen in his obtaining the ultimate release and clearing of two men falsely convicted of murder, the celebrated cases of George Edalji and Oscar Slater),¹¹ clearly demonstrate the roots of Holmes's essential character and methods within his creator. Dr. Edmond Locard, Chief of the Surete Police Laboratories at Lyon, stated that "Conan Doyle was an absolutely astonishing scientific investigator," and the criminologist Albert Ullman took the position that "Conan Doyle was a greater criminologist than his creation Sherlock Holmes" (quoted in Anonymous 1959, p. 69).

The important point being made here is that the successes of Dr. Bell and Sir Arthur Conan Doyle demonstrate the fact that the methods of scientific analysis exemplified and dramatized by Sherlock Holmes in his adventures have had their counterparts in the real world. As the well known American detective William Burns put it:

I often have been asked if the principles outlined by Conan Doyle, in the Sherlock Holmes stories could be applied in real detective work, and my reply to this question is decidedly "yes." (Quoted in Anonymous 1959, p. 68)

What, then exactly, is the "method" of Sherlock Holmes, and what are its limitations and implications for a modern applied social psychology? We turn now to an examination of Holmes's views of science, and of man and society, and to his prescriptions for the applications of the former to the latter as these are outlined in the canon.

THE METHOD OF SHERLOCK HOLMES

It is unfortunate that although Holmes's method is central to his character and universal attractiveness, there is no systematic state-

ment of it to be found in the canon. It is also surprising to find that relatively little consideration has been given to his techniques of "deduction" in the massive bibliography of Sherlockiana. Most Sherlockians have been more concerned with their own application of Holmes's techniques to the clues available in the canon than upon an examination of the methods themselves. Therefore, we must turn to a search for the many but scattered statements about his method uttered by Holmes throughout his adventures.

Holmes's "Science of Deduction and Analysis"

It has often been stated that science is but refined common sense. With this Holmes would probably agree for he states that his own approach is a "simple art, which is but systematized common sense."¹² But his view is not a simple or mechanical view of the process, for at another point he notes that a "mixture of imagination and reality . . . is the basis of my art."¹³ Though Holmes stresses raw empiricism to a degree reminiscent of the archinductionist Francis Bacon, he does not neglect the importance of creative imagination. "It is, I admit, mere imagination," Holmes states, "but how often is imagination the mother of truth?"¹⁴ "One's ideas must be as broad as nature if they are to interpret nature,"¹⁵ he notes, and

breadth of view . . . is one of the essentials of our profession. The interplay of ideas and the oblique uses of knowledge are often of extraordinary interest.¹⁶

Although Sir Arthur Conan Doyle was to become a major promoter of spiritualism, Holmes, in a true Comtean manner of positivism and scientific skepticism refuses to seriously entertain hypotheses of supernatural causation. Recognizing that "the devil's agents may be of flesh and blood,"¹⁷ before considering the possibility that "we are dealing with forces outside the ordinary laws of Nature," he argues that "we are bound to exhaust all other hypotheses before falling back on this one."¹⁸ Holmes states of himself that

this Agency stands flatfooted upon the ground, and there it must remain. The world is big enough for us. No ghosts need apply.¹⁹

Holmes's general philosophical assumptions about the universe are somewhat unclear. Although he apparently believed in a purposeful universe,²⁰ and hoped for the goodness of Providence,²¹ he also expressed a more cynical view when he asked Watson:

But is not all life pathetic and futile? . . . we reach. We grasp. And what is left in our hands at the end? A shadow. Or worse than a shadow—misery.²²

This view of all knowledge as "shadows," aside from its depressive context here, is very much in keeping with the modern scientific and essentially pragmatic view of man as a creator of "cognitive maps" and theoretical "realities" or "conjectures" rather than as discoverer of objective truths and laws.

Holmes also epitomizes the basically deterministic orientation of most modern social science. As he remarked:

The ideal reasoner . . . would, when he had once been shown a single fact in all its bearings, deduce from it not only all the chain of events which led up to it but also all the results which would follow from it. As Cuvier could correctly describe a whole animal by the contemplation of a single bone, so the observer who has thoroughly understood one link in a series of incidents should be able to accurately state all the other ones, both before and after.²³

Or as Holmes put it in his seminal article "The Book of Life" (in a magazine Dr. Watson unfortunately neglected to name):

From a drop of water . . . a logician could infer the possibility of an Atlantic or a Niagra without having seen or heard of one or the other. So all life is a great chain, the nature of which is known whenever we are shown a single link of it. Like all other arts, the Science of Deduction and Analysis is one which can only be acquired by long and patient study, nor is life long enough to allow any mortal to attain the highest possible perfection in it.²⁴

This determinism was seen as present at all levels of life, but Holmes clearly sides with sociology against many psychologists when he states that

while the individual man is an insoluble puzzle, in the aggregate he becomes a mathematical certainty. You can, for example, never foretell what any one man will do, but you can say with precision what an average member will be up to. Individuals vary, but percentages remain constant.²⁵

As with all nomothetic sciences, emphasis is placed upon the search for laws and recurrent events. Holmes is greatly impressed by regularities and repetitions in history, and in speaking of a crime to his friend Inspector Gregson, Holmes echoes Ecclesiastes when he says: "There is nothing new under the sun. It has all been done before."²⁶ And on another occasion he says of his arch-enemy: "Everything comes in circles, even Professor Moriarty."²⁷ Holmes seeks out generalizations and will ultimately settle only for universal propositions. As he put it: "I never make exceptions. An exception disproves the rule."²⁸

Central to Holmes's basic approach, however, is his concern with the empirical verification of his conjectures. His emphasis on induction—an emphasis more present in his words than in his actual practice, as we shall see—is based on a great fear of conceptual detachment from the “real” world of observable phenomena. “The temptation to form premature theories upon insufficient data is the bane of our profession,” he tells Inspector MacDonald.²⁹ For as Holmes says again and again:

It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.³⁰

It is a capital mistake to theorize in advance of the facts.³¹

It is a capital mistake to theorize before you have all the evidence.³²

. . . it is an error to argue in front of your data. You find yourself insensibly twisting them round to fit your theories.³³

And

how dangerous it always is to reason from insufficient data.³⁴

Holmes insists upon the absolute necessity of observable facts.

“Data! data! data!” he cried impatiently. “I can’t make bricks without clay.”³⁵

But he claims even more than this, for his posture is attemptedly atheoretical in an inductive manner remarkably reminiscent of the sort of posture taken today by some behavioristic followers of B.F. Skinner. But like the Skinnerians, Holmes is forced to assert at least provisional hypotheses or “hunches” about the world. Holmes may cry out “No, no: I never guess. It is a shocking habit—destructive to the logical faculty,”³⁶ but he is forced to acknowledge that

one forms provisional theories and waits for time and fuller knowledge to explode them. A bad habit . . . ; but human nature is weak.³⁷

At base, Holmes puts his trust in the empirical world which he sees as the firm and ultimate arbiter. “I can discover facts, Watson, but I cannot change them.”³⁸ And these facts must always be questioned for “it is as well to test everything.”³⁹

Holmes's Method

Holmes clearly subscribed to the general rule of the modern scientific community that since scientific knowledge is of its definition *public*

knowledge (in so far as it must be inter-subjectively communicable), it should ideally be open to public scrutiny. Holmes generally makes no secret of his methods.

It has always been my habit to hide none of my methods either from my friend Watson or from anyone who might take an intelligent interest in them.⁴⁰

Holmes does occasionally fail to inform his astounded clients of his methods, especially in the early stages of his cases, for, as he put it: "I have found it wise to impress clients with a sense of power."⁴¹ Yet, he usually lets us in on his reasonings and points out that the method is basically quite unmysterious.

It is not really difficult to construct a series of inferences, each dependent upon its predecessor and each simple in itself. If, after doing so, one simply knocks out all the central inferences and presents one's audience with the starting-point and the conclusion, one may produce a startling, though possibly a meretricious, effect.⁴²

Holmes was very concerned with the clear presentation of his methods, so much so, in fact, that he complained of Watson's romanticizing his adventures:

Your fatal habit of looking at everything from the point of view of a story instead of as a scientific exercise has ruined what might have been an instructive and even classical series of demonstrations.⁴³

He even spoke of his plans to do the job properly himself:

I propose to devote my declining years to the composition of a textbook which shall focus the whole art of detection into one volume.⁴⁴

In speaking of the "qualities necessary for the ideal detective," Holmes noted that they were: (1) knowledge, (2) the power of observation, and (3) the power of deduction.⁴⁵ We turn now to an examination of each of these.

The Detective's Need for Knowledge. As we have seen, Holmes stressed the interconnectedness of all elements of the universe in his deterministic view. He also recognized the complexities and sometimes surprising connections that might be found, for he noted that

for strange effects and extraordinary combinations we must go to life itself, which is always far more daring than any effort of the imagination.⁴⁶

Thus, the effective detective must be well informed about a vast spectrum of potentially relevant bits of information. Holmes's own storehouse of information was astounding. As we noted earlier, he placed a great emphasis on breadth of knowledge.⁴⁷ Watson indicates that Holmes's mastery of the topics relevant to his profession (including chemistry, British law, anatomy, botany, geology, and especially the sensational literature) was remarkable.⁴⁸ Yet, Watson also notes that Holmes's "ignorance was as remarkable as his knowledge,"⁴⁹ for Holmes apparently knew practically nothing of literature, philosophy, astronomy, or politics.⁵⁰ Holmes explained his lack of concern with these areas as follows:

You see . . . I consider that a man's brain originally is like a little empty attic, and you have to stock it with such furniture as you choose. A fool takes in all the lumber of every sort that he comes across, so that the knowledge which might be useful to him gets crowded out, or at best is jumbled up with a lot of other things, so that he has a difficulty in laying his hands upon it. Now the skillful workman is very careful indeed as to what he takes into his brain-attic. He will have nothing but the tools which may help him in doing his work, but of these he has a large assortment, and all in the most perfect order. It is a mistake to think that that little room has elastic walls and can distend to any extent. Depend upon it there comes a time when for every addition of knowledge you forget something that you knew before. It is of the highest importance, therefore, not to have useless facts elbowing out the useful ones.⁵¹

Despite this avoidance of the irrelevant (based upon a view of memory with which most contemporary experts on cognitive processes would certainly disagree), Holmes still stocked a vast quantity of information in his memory that was not immediately useful; for as he stated on another occasion:

My mind is like a crowded box-room with packets of all sorts stowed away therein—so many that I may well have but a vague perception of what was there.⁵²

What Holmes basically argued for was the need for specialization in the quest for knowledge so that one might gain the maximum in resources relevant to one's analytic needs. The argument is not primarily one for avoiding some areas of knowledge so much as it is for a commitment of one's limited resources to the most efficient ends. As Holmes stated in a somewhat different context:

Some facts should be suppressed, or at least a just sense of proportion should be observed in treating them.⁵³

Thus, not all knowledge is equally useful, a viewpoint certainly the dominant motif in education (not only in the study of social psychology but in most areas) today.

The Detective's Need for Observation. Holmes emphasized the need for keen observation, for in detective work "genius is an infinite capacity for taking pains."⁵⁴ Openness and receptivity to data is essential.

I make a point of never having any prejudices and of following docilely wherever fact may lead me.⁵⁵

Holmes was much aware of the need to control for subjective distortions even in relation to his clients.

It is of the first importance . . . not to allow your judgement to be biased by personal qualities. A client is to me a mere unit, a factor in a problem. The emotional qualities are antagonistic to clear reasoning.⁵⁶

His greatest emphasis, however, was upon "observing" what others merely "see." Thus, though both Dr. Watson and Holmes had walked the steps leading up from the hall to their room hundreds of times, Holmes had "observed" that there were seventeen steps while Watson had merely "seen" them.⁵⁷ As Holmes put it:

The world is full of obvious things which nobody by any chance ever observes.⁵⁸

There is nothing more deceptive than an obvious fact.⁵⁹

I have trained myself to notice what I see.⁶⁰

Holmes's observation extended not only to observed facts and events but also to their absence. Negative evidence is frequently regarded as highly significant. Thus, when Inspector MacDonald asks Holmes if he found anything compromising following Holmes's search through Professor Moriarty's papers, Holmes replied, "Absolutely nothing. That was what amazed me."⁶¹ Or, speaking of the absence of international activity following the theft of an important government document, Holmes noted: "Only one important thing has happened in three days, and that is that nothing has happened."⁶² But the classic example is the often-quoted instance during Holmes's search for a missing race-horse wherein Inspector Gregory asks Holmes:

"Is there any other point to which you would wish to draw my attention?"

"To the curious incident of the dog in the night-time."

"The dog did nothing in the night-time."

"That was the curious incident," remarked Sherlock Holmes.⁶³

Throughout the canon, Holmes emphasizes the importance of what to the less trained might appear to be trifles. But for Holmes, "there is nothing so important as trifles,"⁶⁴ and "to a great mind . . . nothing is little."⁶⁵

It has long been an axiom of mine that the little things are infinitely the most important.⁶⁶

You know my method. It is founded upon the observance of trifles.⁶⁷

Never trust to general impressions . . . but concentrate upon the details.⁶⁸

Attention to minutiae is essential, for

as long as the criminal remains upon two legs, so long must there be some identification, some abrasion, some trifling displacement which can be detected by the scientific searcher.⁶⁹

The Detective's Need for Deduction. Holmes has almost unlimited faith in the power of scientific analysis to obtain a reconstruction of human events, for, as he put it: "What one man can invent, another can discover."⁷⁰ For Holmes, "the grand thing is to be able to reason backwards."⁷¹ Reasoning from a set of events to their consequences Holmes calls "synthetic" reasoning, whereas reasoning "backwards" from the results to their causes he calls "analytic" reasoning.

There are fifty who can reason synthetically for one who can reason analytically There are few people , if you told them the result, would be able to evolve from their own inner consciousness what the steps were which led up to that result.⁷²

The first step Holmes suggests is basic examination and sifting out from the existing information the definite from the less definite data.

The difficulty is to detach the framework of fact—of absolute, undeniable fact—from the embellishments of theorists and reporters. Then, having established ourselves upon this sound basis, it is our duty to see what inferences may be drawn, and which are the special points upon which the whole mystery turns.⁷³

It is of the highest importance in the art of detection to be able to recognize out of a number of facts which are incidental and which vital.⁷⁴

Following a sorting of the facts for their reliability, Holmes recommends special inspection of the unique and unusual details present in the situation.

The more *outré* and grotesque an incident is, the more carefully it deserves to be examined, and the very point which appears to complicate a case is, when duly considered and scientifically handled, the one which is most likely to elucidate it.⁷⁵

Singularity is almost invariably a clue. The more featureless and commonplace a crime is, the more difficult is it to bring home.⁷⁶

What is out of the common is usually a guide rather than a hindrance.⁷⁷

It is only the colourless, uneventful case which is hopeless.⁷⁸

Yet, Holmes notes that extreme uneventfulness may itself be a singular event which gives a clue to the mystery:

Depend upon it there is nothing so unnatural as the commonplace.⁷⁹

Holmes is careful in his evaluation of circumstantial evidence. It is not to be ignored for "circumstantial evidence is occasionally very convincing, as when you find a trout in the milk."⁸⁰ But the investigator must be very cautious, since

circumstantial evidence is a very tricky thing . . . ; it may point very straight to one thing, but if you shift your own point of view a little, you may find it pointing in an equally uncompromising manner to something entirely different.⁸¹

Although Holmes's greatest emphasis is upon the objective gathering of facts, he fully recognizes the heuristic value of imaginative reconstruction through role playing by the investigator.

You'll get results . . . by always putting yourself in the other fellow's place, and thinking what you would do yourself. It takes some imagination but it pays.⁸²

You know my methods in such cases . . . ; I put myself in the man's place, and having first gauged his intelligence, I try to imagine how I should myself have proceeded under the same circumstances.⁸³

Holmes emphasizes the need for pursuing several possible lines of explanation any one of which takes account of the facts. Other hypotheses must always be entertained, and when considering an explanation, "you should never lose sight of the alternative."⁸⁴

One should always look for a possible alternative and provide against it. It is the first rule of criminal investigation.⁸⁵

For

when you follow two separate chains of thought . . . you will find some point of intersection which should approximate the truth.⁸⁶

From this reconstruction of alternative explanations which fit the facts, one must move next into what might superficially appear to be guessing but is actually

the region where we balance probabilities and choose the most likely. It is the scientific use of the imagination, but we have always some material basis on which to start our speculations.⁸⁷

Holmes sees arrival at the truth in terms of setting hypotheses into competition with one another. But the weighing of the alternatives includes not only a comparison of them in terms of *probability*. Explanations must always be considered in terms of their *possibility*. The *possible*, however, is determined not only by the feasibility of the suggested events. It is also the remaining result of elimination of those alternative hypotheses perceived to be impossible. Holmes often repeats "the old axiom that when all other contingencies fail, whatever remains, however improbable, must be the truth."⁸⁸

Though the analytic process described above is primarily an exercise in logic without direct recourse to the empirical world, Holmes next demanded the empirical validation of the resulting hypotheses in terms which closely approximate what is today called the *hypothetico-deductive* method.⁸⁹

I will give my process of thought . . . That process . . . starts upon the supposition that when you have eliminated all which is impossible, that whatever remains, however improbable, must be the truth. It may well be that several explanations remain, in which case one tries test after test until one or other of them has a convincing amount of support.⁹⁰

For

when the original intellectual deduction is confirmed point by point by quite a number of independent accidents, then the subjective becomes objective and we can say confidently that we have reached our goal.⁹¹

Throughout Holmes's approach, logical (mostly deductive) and empirical (mostly inductive) considerations are in constant interrela-

tion. The empirical restricts the theoretical, as in the case where Holmes states that

*It is impossible as I state it, and therefore I must in some respect have stated it wrong.*⁹²

But empirical events must be interpreted in terms of established theoretical considerations. Thus,

when a fact appears to be opposed to a long train of deductions, it invariably proves to be capable of having some other interpretation.⁹³

In a very real and practical sense, Holmes's method anticipated the contemporary emphasis in sociology upon the intertwining relationships between theory and research (cf., Merton 1957, pp. 85-117).

The Application of Holmes's Method

Thus far, we have outlined Holmes's general approach to the problematic in social life. We turn now to a consideration of the limitations of that approach, especially as exemplified in Holmes's own applications of his method.

Holmes's Uses of Observation. Throughout the adventures, Holmes insists upon intensive familiarization of the investigator with his problem, for familiarity will bring clarification. He notes that "it is a mistake to confound strangeness with mystery." Familiarity is seen as generally reducing the problematic elements in an event. He even states that

as a rule . . . the more bizarre a thing is the less mysterious it proves to be.⁹⁴

Familiarization can also remove fear, for the unfamiliar leaves us room for imagination, and "where there is no imagination, there is no horror."⁹⁵

Holmes attempted to familiarize himself with all possible observable details of life which might have a bearing upon his criminal cases. This familiarization was not just the result of passive observation but includes the active search for new details of meaning which might prove useful in the future. Thus, for example, Holmes was described as having at one time beaten a corpse to discern how bruises might be produced after death.⁹⁷

Holmes argued, as we have noted, that all human actions leave some traces from which the discerning investigator can deduce information. This emphasis on obtaining indirect data from sources

through observation of physical traces constitutes an early recognition of the potential uses of what recently have been termed *unobtrusive measures*. (Webb, *et al.*, 1966, p. 35). Again and again, Holmes concerns himself with the small details about those involved in his inquiries.

I can never bring you to realize the importance of sleeves, the suggestiveness of thumbnails, or the great issues that may hang from a boot lace.

Always look at the hands first, . . . then cuffs, trouser-knees and boots.⁹⁹

[T]here is no part of the body which varies so much as the human ear. Each ear is as a rule quite distinctive, and different from all other ones.¹⁰⁰

It would be difficult to name any articles which afford a finer field for inference than a pair of glasses.¹⁰¹

Pipes are occasionally of extraordinary interest . . . Nothing has more individuality save, perhaps, watches and bootlaces.¹⁰²

Nor does Holmes restrict his observations to things seen or heard. The investigator should develop his sense of smell, too, for

there are seventy-five perfumes, which it is very necessary that a criminal expert should be able to distinguish from each other, and cases have more than once within my own experience depended upon their prompt recognition.¹⁰³

Possibly the most important and frequent among the traces carefully examined by Holmes is the footprint. Of it he says:

There is no branch of detective science which is so important and so much neglected as the art of tracing footprints.¹⁰⁴

Even the traces of bicycle tires are not left unconsidered by Holmes, who claims at one point that he can differentiate some forty-two different "tyre impressions."¹⁰⁵

Though Holmes's uses of the observable differences which he notes and conveys to the reader are often fantastic and hardly practicable in the "real world" outside the pages of the canon, the basic approach represented by these fictional narratives has startling parallels in the actual world of criminalistics and forensic medicine (e.g., cf. Stewart-Gordon 1961) where true cases of detection through subtle observation and inference are often far more startling than anything ever suggested by Sir Arthur Conan Doyle.

The Character of Holmes's Inferences. Although examples of Holmes's remarkable uses of inference abound in the Sherlockian lit-

erature, as with his basic method, little attention has been given to an examination of the logic of his applications (minor, largely non-critical and merely admiring studies would include those of Hart 1948, Schenck 1953, Mackenzie 1956, Ball 1958, and, especially, Hitchings 1946).

Careful examination of the sixty narratives that comprise the canon reveals at least 217 clearly described and discernible cases of inference (unobtrusive measurement) made by Holmes. Many of these are strung together in logical chains with Holmes gathering a great deal of information from a single object or event.¹⁰⁶ Thus, numerous instances appear in one story (at least thirty in "A Study in Scarlet") with few or none (as in "The Adventure of the Dying Detective") in others.

Although Holmes often speaks of his *deductions*, these are actually quite rarely displayed in the canon. Nor are Holmes's most common inferences technically *inductions*. More exactly, Holmes consistently displays what C.S. Peirce has called *abductions*.¹⁰⁷ Following Peirce's distinctions, the differences between deduction, induction, and abduction can be seen as follows:

DEDUCTION

<i>Case</i>	All serious knife wounds result in bleeding.
<i>Result</i>	This was a serious knife wound.
\therefore <i>Rule</i>	There was bleeding.

INDUCTION

<i>Case</i>	This was a serious knife wound.
<i>Result</i>	There was bleeding.
\therefore <i>Rule</i>	All serious knife wounds result in bleeding.

ABDUCTION

<i>Rule</i>	All serious knife wounds result in bleeding.
<i>Result</i>	There was bleeding.
\therefore <i>Case</i>	This was a serious knife wound.

Abductions, like inductions, are not logically self-contained, as is the deduction, and they need to be externally validated. Peirce sometimes called abductions *hypotheses* (he also called them *presumptive inferences* at times), and in the modern sense, that is what the conclusion in the abduction represents: a conjecture about reality which needs to be validated through testing.

The great weakness in Holmes's applications of inference—at least as Watson related them to us—was Holmes's failure to test the hy-

potheses which he obtained through abduction. In most instances, Holmes simply treated the abducted inference as though it were logically valid. (Most of the parodies on Holmes are built upon this weakness in the narratives.) The simple fact is that the vast majority of Holmes's inferences just do not stand up to logical examination. He concludes correctly simply because the author of the stories allows it so.¹⁰⁸ Upon occasion, the abductive inferences are strung together in a long narrative series which the startled client (or Watson) confirms at each step. In a sense, this constitutes a degree of external corroboration of the hypotheses (especially where they are made about things correctly known to the listener, which is often the case). Nonetheless, in the vast majority of instances, the basic reasoning process described by Watson whereby Holmes astounds his listeners must, in the final analysis, be judged logically inadequate if not invalid.

Despite the logical inadequacies of Holmes's abductions, it must be noted that Holmes does actually hypothesis test (i.e., seek external validation) in at least twenty-eight instances (though not even all of these occasions are directly related to the minimum of 217 abductions found in the canon). Several of the stories include more than one case of hypothesis testing ("Silver Blaze" and "A Study in Scarlet" both evidence three such tests), but most of the narratives show no such attempts at external confirmation by Holmes. The best example of such testing by Holmes occurs in the story of Holmes's search for the missing race horse Silver Blaze. Postulating that the horse's leg was to be operated upon by an amateur to damage it, Holmes reasoned that the culprit would probably practice the operation beforehand to gain skill and assure success. Since sheep were nearby, Holmes further conjectured that the culprit might have practiced upon them. Inquiring about the sheep, Holmes learned that several of them had recently and inexplicably gone lame. The sheep's predicted lameness thus acted as a confirmation of Holmes's conjectures.¹⁰⁹

The reconstruction of Holmes's methods and the extraction of the fundamental ideas in his thought is necessarily incomplete. Holmes relates only bits and pieces to us through the narratives of Dr. Watson, and even these items are stated sparingly. Watson noted of Holmes that "he pushed to an extreme the axiom that the only safe plotter was he who plotted alone."¹¹⁰ And as Holmes put it:

I do not waste words or disclose my thoughts while a case is actually under consideration.¹¹¹

I claim the right to work in my own way and give my results at my own time — complete, rather than in stages.¹¹²

Despite these obstacles, we have seen that a general reconstruction is possible, and it reveals a systematic and consistent orientation.

HOLMES AND SOCIAL PSYCHOLOGY

Just as with his basic method, examination of the canon reveals a large number of statements and insights, many stated in near-propositional and testable form about many aspects of social and psychological reality. We turn now to a look at some of the observations.

Holmes on Character and Personality

Holmes brings the same skepticism which served him as a detective of crimes into his general orientation towards the social world. As is the case with most social psychologists who term themselves symbolic interactionists (cf. Stone and Farberman 1970), Holmes was much aware that people's definitions of their situations, their phenomenological perception of their worlds, rather than physical realities, may be the important factors which determine their actions.

What you do in this world is a matter of no consequence The question is what can you make people believe you have done.¹¹³

Holmes's skepticism of appearances bordered upon the paranoid when it came to women. Holmes was especially cautious in his relations with women and found it nearly impossible to correctly assess their motives.

Women are never to be entirely trusted – not the best of them.¹¹⁴

[T]he motives of women are so inscrutable . . . Their most trivial action may mean volumes, or their most extraordinary conduct may depend upon a hairpin or a curling-tongs.¹¹⁵

He showed special concern about the socially isolated female.

One of the most dangerous classes in the world . . . is the drifting and friendless woman. She is the most harmless, and often the most useful of mortals, but she is the inevitable inciter of crime in others. She is helpless. She is migratory. She has sufficient means to take her from country to country and from hotel to hotel. She is lost, as often as not, in a maze of obscure *pensions* and boarding houses. She is a stray chicken in a world of foxes. When she is gobbled up she is hardly missed.¹¹⁶

Yet, Holmes was no misogynist (as is well seen in his admiration for Irene Adler who bested him in "A Scandal in Bohemia"), and he placed great value on female intuition.

I have seen too much not to know that the impression of a woman may be more valuable than the conclusion of an analytic reasoner.¹¹⁷

Holmes mentions several generalizations about women which proved valuable to him in successfully analyzing his cases, but these were highly specific to their situations and probably would not stand up under rigorous investigation in other contexts.¹¹⁸

In attempting to read a subject's character and motives, Holmes used a variety of subtle indicators. The movement of the subject's eyes and body were carefully noted (such study of "body language" is today called *kinesics*):

I can read in a man's eye when it is his own skin that he is frightened for.¹¹⁹

And, seeing a young lady client's motions on the street as she approached his apartment, he noted:

Oscillation upon the pavement always means an *affaire du coeur*.¹²⁰

Extensive examination was always given not only to the subject under investigation but also to those with whom he associated, including children and animals.

I have frequently gained my first real insight into the character of parents by studying their children.¹²¹

And

I have serious thoughts of writing a small monograph upon the uses of dogs in the work of the detective A dog reflects the family life. Whoever saw a frisky dog in a gloomy family, or a sad dog in a happy one? Snarling people have snarling dogs, dangerous people have dangerous ones. And their passing moods may reflect the passing moods of others.¹²²

Holmes suggested a number of interesting ideas about personality. Thus, he endorsed the idea of complementarity in mate selection:

You may have noticed how extremes call to each other, the spiritual to the animal, the cave-man to the angel.¹²³

He argued that excellence at chess was "one mark of a scheming mind."¹²⁴ He claimed that all the misers were jealous men,¹²⁵ and that "jealousy is a strong transformer of characters."¹²⁶ Recognizing the importance of man's inferiorities, Holmes noted that "weakness in one limb is often compensated for by exceptional strength in the others."¹²⁷ Regarding the appreciation of subtle variations by those with expertise, he noted that

to the man who loves art for its own sake, . . . it is frequently in its least important and lowliest manifestations that the keenest pleasure is to be derived.¹²⁸

And of a man's stubborn psychological inertia, he generalized that

a man always finds it hard to realize that he may have finally lost a woman's love, however badly he may have treated her.¹²⁹

All these generalizations must remain questionable until empirically tested, but these maxims suggest interesting and potentially fruitful directions for future research.

Holmes as Criminologist

Thus far, we have been primarily concerned with Holmes's general orientation to the investigation and perception of the realities of social life. As a consulting detective, however, his primary concern was with legal and moral crimes. We turn now to examine his insights and observations into this more specialized domain.

Holmes on Justice and Deception. Holmes felt that his personal hardships were "trifling details" that "must never interfere with the investigation of a case."¹³⁰ But he was far from the usual stereotype most people have of the daring hero. Though a brave man, Holmes did not ignore adversity, for he thought that "it is stupidity rather than courage to refuse to recognize danger when it is close upon you."¹³¹ Far more contrary to the pure heroic image, however, was the fact that Holmes's activities sometimes ran counter to the law. As an unofficial investigator, he was not bound to the conventions of the police. He had little respect for the abilities of Scotland Yard's men and thought them generally "a bad lot" (though he did display respect for the abilities of the Yard's Inspector Tobias Gregson). He went even further in his disdain for other police, as when he noted that "local aid is always either worthless or biased."¹³² Holmes was well aware of the inadequacies of law enforcement and commented that "many men have been wrongfully hanged."¹³³

Holmes did apparently have a degree of faith in the ultimate victory of justice, as indicated in his statement that

violence does, in truth, recoil upon the violent, and the schemer falls into the pit which he digs for another.¹³⁴

But Holmes sometimes finds it necessary to go outside the law to assure justice. Thus, he occasionally commits trespass, burglary, and

unlawful detention. Of the most serious of these, burglary, he argues that it

is morally justifiable so long as our object is to take no articles save those which are used for an illegal purpose.¹³⁵

He adopted this basically vigilante role because, as he put it:

I think that there are certain crimes which the law cannot touch, and which therefore, to some extent, justify private revenge.¹³⁶

Holmes also recognized that prison was not always an appropriate punishment for a crime, and that it might actually deter the process of reform. Thus, on at least fourteen occasions, Holmes actually allowed known felons to go free (Leavitt 1940, p. 27), for as he said of one such man he released: "Send him to gaol now, and you make him a gaolbird for life."¹³⁷

Holmes was also not beyond deception if he felt it might suit the ends of justice. This went to rather extreme lengths when he attempted to trap "the worst man in London" by disguising himself as a plumber and becoming engaged to the villain's maid to obtain information.¹³⁸ Holmes was aware of the need to obtain the full confidence of his informants, and this he sometimes did by passing himself off as one of them. Thus, on one occasion when he needed certain information, he disguised himself as a groom, explaining to Watson that

there is a wonderful sympathy and freemasonry among horsey men. Be one of them, and you will know all that there is to know.¹³⁹

On other occasions, Holmes faked illnesses, accidents, information, and even his own death. He often used the newspapers in a manipulative manner¹⁴⁰ and noted that "the press . . . is a most valuable institution, if you only know how to use it."¹⁴¹

Holmes on Crime. Sherlock Holmes was well aware of the fact that crime rates normally show only *reported* instances of law violation. Thus, in looking at the pleasant countryside through which he and Dr. Watson were moving by train, Holmes remarked to Watson:

You look at these scattered houses, and you are impressed by their beauty. I look at them, and the only thought which comes to me is a feeling of their isolation, and of the impunity with which crime may be committed there . . . They always fill me with a certain horror. It is my belief . . . founded upon my experience, that the lowest and vilest alleys in London do not present a more dreadful record of sin than does the smiling and beautiful country-side . . .

[And] the reason is very obvious. The pressure of public opinion can do in the town what the law cannot accomplish. There is no lane so vile that the scream of a tortured child, or the thud of a drunkard's blow, does not beget sympathy and indignation among the neighbours, that a word of complaint can set it going, and there is but a step between the crime and the dock. But look at these lonely houses, each in its own fields, filled for the most part with poor ignorant folk who know little of the law. Think of the deeds of hellish cruelty, the hidden wickedness which may go on year in, year out, in such places, and none the wiser.¹⁴²

As with his views on personality, Holmes offers us numerous maxims about crime and criminal investigation which the contemporary criminologist might well consider. Thus, Holmes claimed that there was a potential relationship between the unusual and the criminal, as when he pointed out that "there is but one step from the grotesque to the horrible"¹⁴³ and "often the grotesque has deepened into the criminal."¹⁴⁴ Yet, he also warned us that we should not assume such a relationship to be automatic for

the strangest and most unique things are very often connected not with the larger but with the smaller crimes, and occasionally, indeed, where there is room for doubt whether any positive crime has been committed.¹⁴⁵

Holmes found two types of crime especially difficult to unravel. He found the "senseless" or motiveless crime the greatest challenge for the criminal investigator.

The most difficult crime to track is the one which is purposeless.¹⁴⁶

But where a discernible motive is involved, the planned crime presents great difficulties for a detective also, for

where a crime is coolly premeditated, then the means of covering it are coolly premeditated also.¹⁴⁷

This realization of the hidden complexities potential within a planned crime led Holmes to be most suspicious in such cases, especially of suspects with seemingly solid alibis, for, he noted, "only a man with a criminal enterprise desires to establish an alibi."¹⁴⁸ Finally, it might be noted that in addition to seeing these two types of crime as formidable, Holmes also recognized special difficulty with cases where the criminal was an M.D.

When a doctor does go wrong he is the first of criminals. He has nerve and he has knowledge.¹⁴⁹

Canonical Errors and Anticipations. As might be expected, the adventures sometimes show Holmes stating scientifically erroneous ideas. These largely reflect the popular notions of his time. Thus, Holmes placed far too great an emphasis on heredity as a causative factor in the creation of criminals. He referred to an hereditary criminal strain in the blood of the arch-villain Professor Moriarty¹⁵⁰ and strongly stated his views when he said:

There are some trees . . . which grow to a certain height and then suddenly develop some unsightly eccentricity. You will see it often in humans. I have a theory that the individual represents in his development the whole procession of his ancestors, and that such a sudden turn to good or evil stands for some strange influence which came into the life of his pedigree. The person becomes, as it were, the epitome of the history of his own family.¹⁵¹

Holmes also seems to share some of the stereotypes and prejudices of his Victorian world as regarded some minority groups. Thus, he displayed mild prejudice towards Negroes and Jews.¹⁵²

He also had some unusual and false ideas about thought processes. We have already mentioned his view of memory as similar to an attic which can become over-crowded.¹⁵³ He also showed a degree of misunderstanding of cognitive processes in the following statements:

To let the brain work without sufficient material is like racing an engine. It racks itself to pieces.¹⁵⁴

[T]he faculties become refined when you starve them.¹⁵⁵

And

Intense mental concentration has a curious way of blotting out what has passed.¹⁵⁶

Despite such occasional lapses into the misinformation common to his historical period, Holmes managed to pioneer in the anticipation of several innovations in scientific crime detection. Since the science of ballistics was unknown to police prior to 1909 (cf. Baring-Gould 1967, II, p. 349, note 51), Holmes's statement about a villain in a story first published in 1903 that "the bullets alone are enough to put his head in a noose"¹⁵⁷ seems to show him to be a true pioneer in this field. Holmes was also an early advocate of the importance of both fingerprints,¹⁵⁸ and the Bertillon system of measurement.¹⁵⁹

Among the most interesting of his anticipations was his realization of the possibility of distinguishing and identifying different types of

communications. He was able to spot identifying differences between a wide variety of printing types in newspapers and magazines, and he stated that

the detection of types is one of the most elementary branches of knowledge to the special expert of crime.¹⁶⁰

And, more important, he early recognized that typewriters could be identified.

It is a curious thing . . . that a typewriter has really quite as much individuality as a man's handwriting. Unless they are quite new, no two of them write exactly alike. Some letters get more worn than others, and some wear only on one side.¹⁶¹

But most of all, Holmes strongly believed in the great knowledge which could be gained through the careful examination of handwritings (cf. Christie 1955 and Swanson 1962). Holmes not only pioneered in this study but went considerably beyond what most graphologists would yet claim for their science when he made the statements that

the deduction of a man's age from his writing is one which has been brought to a considerable accuracy by experts.¹⁶²

And that

a family mannerism can be traced in . . . two specimens of writing.¹⁶³

Finally, it should be noted that Holmes may have anticipated some of the devices of later psychoanalysis. Thus, it would appear that he saw the basis for tests of free-association, for in analyzing a coded message which contained seemingly extraneous and meaningless words, he noted of the writer:

He would naturally use the first words which came to his mind, and if there were so many which referred to sport among them, you may be tolerably sure that he is either an ardent shot or interested in breeding.¹⁶⁴

Holmes also clearly understood the defense mechanism of projection when he stated of a villain:

It may only be his conscience. Knowing himself to be a traitor, he may have read the accusation in the other's eyes.¹⁶⁵

And at another point, when speaking of the subtle influences of music, he would seem to have closely paralleled the idea of archetypes within the collective unconscious as later developed by Carl G. Jung when he said:

There are vague memories in our souls of the misty centuries when the world was in its childhood.¹⁶⁶

Holmes, then, shared many of the errors of the men of his time, but, as we hope has been adequately shown in this essay, he also extended our view of man. Given the extraordinary popularity of the tales of his adventures, created for us through the genius of Sir Arthur Conan Doyle, for many criminologists who recognized the merits of the detective's methods, it is doubtful that Sherlock Holmes could have had a greater impact on the sciences of man had he actually lived.

NOTES

1. The fully accepted Holmes legend appears in four full-length novels and fifty-six short stories. Though a great many editions of the works exist, the most recent and authoritative version of the tales is to be found in William S. Baring-Gould's beautifully edited and introduced *The Annotated Sherlock Holmes* in two volumes (1967). All reference to the Holmes stories throughout this essay refer to this edition and its pagination.

In addition to the above works (called the "canon" or the "sacred writings" by Sherlockian scholars), Holmes is also believed to figure prominently in two other stories by Arthur Conan Doyle ("The Man With the Watches" and "The Lost Special") available as *The Sherlockian Doyle* (1968). There also was published a posthumously discovered manuscript which was at first thought to have been written by Sir Arthur Conan Doyle as "The Case of the Man Who Was Wanted" (1948). The authenticity of this piece has since been challenged with the result being general agreement that the story was actually written by a Mr. Arthur Whittaker, who had sold the story to Conan Doyle in 1913. For full details on this episode, see Brown (1969).

Within the sixty narratives comprising the canon, mentions are made of at least fifty-five other cases (for a listing, see Starrett 1960, pp. 90-92). A minority of Sherlockians would therefore be inclined to include twelve other stories among the sacred writings which were written by Sir Arthur's son and official biographer, Adrian Conan Doyle and John Dickson Carr (1954).

In addition to the canon and its apocrypha plus some secondary references to Holmes by Doyle (most notably in several of his plays based on the stories), there is a vast literature based directly on the canon including over twenty-one plays, one Broadway musical, hundreds of radio and television productions, and at least 123 motion pictures. This is not to count the hundreds of books and articles dealing with Sherlockiana or the hundreds of pastiches and parodies of the canon, of which many of the best were anthologized by Ellery Queen (1944).

2. According to Sherlockians, of course, Doyle is not the author of the stories but merely an acquaintance of Holmes's associate, Dr. John Watson, who wrote (narrated) fifty-six of the sixty adventures in the canon. "The Adventure of the Blanched Soldier" and "The Adventure of the Lion's Mane" were apparently written by Holmes himself, and "The Adventure of the Mazarin Stone" and "His Last Bow" were written by

person or persons unknown. Sherlockians have speculated about the authorship of these two narratives, suggesting everyone from Mrs. Mary Watson, Inspector Les-trade, a distant relative of Holmes called Dr. Verner, to Dr. Watson himself merely pretending to write in the third person. Even the rather extreme suggestion was made, first by the great Sherlockian scholar, Edgar W. Smith, that these two stories were written by Watson's friend Sir Arthur Conan Doyle. For full details on this controversy, see Baring-Gould (1967, II, pp. 748-50).

For biographical works on Sir Arthur Conan Doyle see: Carr (1949); Nordon (1967); Pearson (1943); Lamond (1931); and M. and M. Hardwick (1964). See also Doyle's autobiography (1924). Re Doyle's writings, see: Locke (1928); Nordon (1967, pp. 347-51); and Carr (1949, pp. 285-95).

3. The adventures themselves have been chronologized differently by numerous Sherlockians, but Baring-Gould (1967) sees them as spanning from 1874 to 1914. Far more controversially, in his biography of Holmes, Baring-Gould (1962) calculated Holmes's birth year as 1854 and placed his death in 1957. For other chronologies, see: Bell (1932); Blackeney (1932); Christ (1947); Brend (1951); Zeisler (1953); Baring-Gould (1955); and Folsom (1964).

4. E.g., Baring-Gould (1967) and Brend (1951). For a biographical study of Dr. John Watson, see Roberts (1931).

5. E.g., Park (1962) and M. and M. Hardwick (1962). Many other reference volumes on the canon exist including: Harrison (1958); Christ (1947); Bigelow (1959); Petersen (1956); Smith (1940); and Wolff (1952 and 1955).

6. Among the many excellent books and collections of Sherlockiana one must include: Bell (1934); Starrett (1934 and 1940); Smith (1944); and Holroyd (1967). A wide variety of such studies appear in the numerous Sherlockian journals. In addition to the best known *The Baker Street Journal*, published in New York, and *The Sherlock Holmes Journal*, published in London, there are many newsletters and other privately printed publications produced by Sherlockian groups around the United States, including: *The Vermissia Herald*, the *Devon County Chronicle*, *Shades of Sherlock*, and the annual *Pontine Dossier*. For an extensive critical bibliography, see Baring-Gould (1967, II, pp. 807-24).

7. The most well-known organization in the United States is the Baker Street Irregulars, born in 1933 in the "Bowling Green" column conducted by Christopher Morley in the *Saturday Review of Literature*. For a brief history of the B.S.I., see Starrett (1960, pp. 128-36). The B.S.I. has Scion Societies (chapters) all over the world including the Orient. Re the Sherlockian organizations see: Baring-Gould (1967, I, pp. 37-42); and Starrett (1960, pp. 128-36).

8. Though these movements have failed thus far, numerous other memorials have been erected to Holmes's memory including plaques in Picadilly, at St. Bartholomew's Hospital, at the Rosslei Inn in Meiringen, Switzerland, and even at the Reichenbach Falls. For full information, see Baring-Gould (1967, I, pp. 43-46).

9. For a somewhat more critical view of Holmes as criminologist, see Anderson (1903).

10. Nordon (1967, p. 214) has argued that Doyle's description of Bell is "too like Holmes to be true," and that the model for Holmes was "invented" by Doyle *a posteriori* to fit the image of a proper man of science. Pearson (1943) suggested that Holmes was largely patterned after one Dr. George Budd, Doyle's eccentric medical partner with whom he briefly practiced at Plymouth. More recently, it has been convincingly argued that Holmes was basically patterned after the private consulting detective Mr. Wendel Shere (Harrison 1971).

11. *The Spectator* said of him: "The fights that he made for victims of perverted justice will stand alongside Voltaire's championship of Jean Calas and Emile Zola's long struggle for Dreyfus" (quoted in Anonymous 1959, p. 67).

12. "The Adventure of the Blended Soldier," II, p. 720.

13. "The Problem of Thor Bridge," II, p. 605.

14. "The Valley of Fear," I, p. 507.

15. "A Study in Scarlet," I, p. 179.

16. "The Valley of Fear," I, p. 512.
17. "The Hound of the Baskervilles," II, p. 20.
18. *Ibid.*
19. "The Adventure of the Sussex Vampire," II, p. 463.
20. "What is the meaning of it, Watson," said Holmes solemnly as he laid down the paper. "What object is served by this circle of misery and violence and fear? It must tend to some end or else our universe is ruled by chance, which is unthinkable. But what end? There is the great standing perennial problem to which human reason is as far from an answer as ever." "The Cardboard Box," II, p. 208.
21. "Our highest assurance of the goodness of Providence seems to me to rest in the flowers. All other things, our powers, our desires, our food, are really necessary for our existence in this first instance. But this rose is an extra. Its smell and its colour are an embellishment of life, not a condition of it. It is only goodness which gives extras, and so I say again that we have much to hope from the flowers." "The Naval Treaty," II, p. 178.
22. "The Adventure of the Retired Colourman," II, p. 546.
23. "The Five Orange Pips," I, p. 398.
24. "A Study in Scarlet," I, p. 159.
25. "The Sign of the Four," I, p. 666. In this passage, Holmes indicates his agreement with Winwood Reade's *The Martyrdom of Man* which Holmes actually misquotes. Cf., Crocker (1964).
26. "A Study in Scarlet," I, p. 168. Re this statement, see W. J. Bell (1947).
27. "The Valley of Fear," I, p. 479.
28. "The Sign of the Four," I, p. 610.
29. "The Valley of Fear," I, pp. 481-82.
30. "A Scandal in Bohemia," I, pp. 349-50.
31. "The Adventure of the Second Stain," I, p. 311.
32. "A Study in Scarlet," I, p. 166.
33. "The Adventure of Wisteria Lodge," II, p. 246.
34. "The Adventure of the Speckled Band," I, p. 261.
35. "The Adventure of the Copper Beeches," II, p. 120.
36. "The Sign of the Four," I, p. 614.
37. "The Adventure of the Sussex Vampire," II, p. 467-68.
38. "The Problem of Thor Bridge," II, p. 589.
39. "The Reigate Squires," I, p. 335.
40. *Ibid.*, p. 341.
41. "The Adventure of the Blanched Soldier," II, p. 707.
42. "The Adventure of the Dancing Men," II, p. 527. Along similar lines, Holmes also stated that "every problem becomes very childish when once it is explained to you" *Ibid.*, p. 528) and "results without causes are much more impressive" ("The Stockbroker's Clerk," II, p. 154).
43. "The Adventure of the Abbey Grange," II, p. 491. Holmes stated the matter more strongly when he told Watson: "Crime is common. Logic is rare. Therefore it is upon logic rather than upon the crime that you should dwell. You have degraded what should have been a course of lectures into a series of tales." "The Adventure of the Copper Beeches," II, p. 115.
44. *Ibid.*, p. 492.
45. "The Sign of the Four," I, p. 612.
46. "The Red Headed League," I, p. 419.
47. "The Valley of Fear," I, p. 512.
48. "A Study in Scarlet," I, p. 156.
49. *Ibid.*, p. 154.
50. *Ibid.*, p. 156. Holmes's many statements dealing with these very areas in other stories patently contradict Watson's early impressions of Holmes's astounding ignorance in these realms, and Holmes's statement to Watson that he was unaware of the basic Copernican Theory of the solar system is generally taken by most Sherlockians to have been intended as a joke by Holmes which Watson failed to perceive. Cf., Baring-Gould (1967, I, pp. 154-57, notes 30-44).

51. "A Study in Scarlet," I, p. 154.
52. "The Adventure of the Lion's Mane," II, p. 784.
53. "The Sign of the Four," I, p. 611.
54. "A Study in Scarlet," I, p. 171. For an excellent review of Holmes's uses of observations and their implications for modern criminological investigation, see Hogan and Schwartz (1964).
55. "The Reigate Squires," I, p. 341.
56. "The Sign of the Four," I, p. 619.
57. "A Scandal in Bohemia," I, p. 349.
58. "The Hound of the Baskervilles," II, p. 18.
59. "The Boscombe Valley Mystery," II, p. 137.
60. "The Adventure of the Blanched Soldier," II, p. 708.
61. "The Valley of Fear," I, p. 479.
62. "The Adventure of the Second Stain," I, p. 313.
63. "Silver Blaze," II, p. 277.
64. "The Man with the Twisted Lip," I, p. 379.
65. "A Study in Scarlet," I, p. 187.
66. "A Case of Identity," I, p. 409.
67. "The Boscombe Valley Mystery," II, p. 148.
68. "A Case of Identity," I, p. 411.
69. "The Adventure of Black Peter," II, p. 402.
70. "The Adventure of the Dancing Men," II, p. 543.
71. "A Study in Scarlet," I, p. 231.
72. *Ibid.*
73. "Silver Blaze," II, p. 262.
74. "The Reigate Squires," I, p. 34.
75. "The Hound of the Baskervilles," II, p. 109.
76. "The Boscombe Valley Mystery," II, p. 135.
77. "A Study in Scarlet," I, p. 231.
78. "The Adventure of Shoscombe Old Place," II, p. 636.
79. "A Case of Identity," I, p. 404.
80. "The Adventure of the Noble Bachelor," I, p. 291.
81. "The Boscombe Valley Mystery," II, p. 136.
82. "The Adventure of the Retired Colourman," II, p. 556.
83. "The Musgrave Ritual," I, p. 137. Holmes believed that getting into the same environment could facilitate this process for he said: "I shall sit in that room and see its atmosphere brings me inspiration. I'm a believer in the *genius loci*." "The Valley of Fear," I, p. 508.
84. "The Adventure of Black Peter," II, p. 410.
85. *Ibid.*, p. 408.
86. "The Disappearance of Lady Carfax," II, p. 665.
87. "The Hound of the Baskervilles," II, p. 24.
88. "The Adventure of the Bruce-Partington Plans," II, p. 446. Also cf., "The Sign of the Four," I, pp. 613-38; and "The Adventure of the Beryl Coronet," II, p. 299.
89. The hypothetico-deductive method is by no means new, for it can even be seen in the works of the ancient Greek philosopher Parmenides. For an excellent modern statement on this approach to knowledge, see: Popper (1968, pp. 215-50).
90. "The Adventure of the Blanched Soldier," II, p. 720.
91. "The Adventure of the Sussex Vampire," II, p. 472.
92. "The Adventure of the Priory School," II, p. 620.
93. "A Study in Scarlet," I, p. 194.
94. *Ibid.* At another point, Holmes quotes Tacitus's Latin maxim that "everything unknown passes for something splendid." "The Red-Headed League," I, p. 421.
95. "The Red-Headed League," I, p. 428.
96. "A Study in Scarlet," I, p. 179.
97. *Ibid.*, p. 149.
98. "A Case of Identity," I, p. 411.
99. "The Adventure of the Creeping Man," pp. 762-63.

100. "The Cardboard Box," II, p. 202.
101. "The Adventure of the Golden Pince-Nez," II, p. 356.
102. "The Yellow Face," I, p. 576.
103. "The Hound of the Baskervilles," II, p. 110.
104. "A Study in Scarlet," I, p. 232.
105. "The Adventure of the Priory School," II, p. 617.
106. According to Ball (1958), this ability is epitomized by what Ball argues are Holmes's twenty-three deductions from a single scrap of paper in "The Reigate Squires," I, pp. 331-45.
107. For full clarification of Peirce on abduction, the reader is best referred to: Cohen (1949, pp. 131-53); Feibleman (1946, pp. 116-32); Goudge (1950, pp. 195-99); and Buchler (1955, pp. 150-56). For an excellent brief survey of the general problems of induction, see Black 1967.
108. Noting the logical discrepancies in Holmes's reasoning, one Sherlockian has commented that Holmes's successful conclusions might be accounted for by the suggestion that Holmes had psychic powers of extra-sensory perception (Reed 1970). Holmes's remarkable abilities actually approximate the reading of Watson's mind in "The Cardboard Box," II, pp. 194-95.
109. "Silver Blaze," II, pp. 277-81.
110. "The Adventure of the Illustrious Client," II, p. 684.
111. "The Adventure of the Blanched Soldier," II, p. 715.
112. "The Valley of Fear," I, p. 491.
113. "A Study in Scarlet," I, p. 231.
114. "The Sign of the Cour," I, p. 656.
115. "The Adventure of the Second Stain," I, p. 311.
116. "The Disappearance of Lady Carfax," II, p. 657.
117. "The Man with the Twisted Lip," I, p. 380.
118. These include: "[T]here are few wives having any regard for their husbands who would let any man's spoken word stand between them and their husband's dead body." "The Valley of Fear," I, p. 506; "No woman would ever send a reply-paid telegram. She would have come." "The Adventure of Wisteria Lodge," II, p. 238; and "When a woman thinks that her house is on fire, her instinct is at once to rush to the thing which she values most . . . A married woman grabs at her baby—an unmarried one reaches for her jewel box." "A Scandal in Bohemia," I, p. 364.
119. "The Resident Patient," I, p. 275.
120. "A Case of Identity," I, p. 406.
121. "The Adventure of the Copper Beeches," II, p. 129.
122. "The Adventure of the Creeping Man," II, p. 752. Recent years have seen social psychologists interested in a similar approach, *e.g.*, see Levinson (1966).
123. "The Adventure of the Illustrious Client," II, p. 680. For a modern version of this idea, see Winch (1955).
124. "The Adventure of the Retired Colourman," II, p. 554.
125. *Ibid.*
126. "The Adventure of the Noble Bachelor," I, p. 291.
127. "The Man with the Twisted Lip," I, p. 376.
128. "The Adventure of the Copper Beeches," II, p. 114.
129. "The Musgrave Ritual," I, p. 137.
130. "The Hound of the Baskervilles," II, p. 110.
131. "The Final Problem," II, p. 302.
132. "The Boscombe Valley Mystery," II, p. 134.
133. *Ibid.*, p. 138.
134. "The Adventure of the Speckled Band," I, p. 261.
135. "The Adventure of Charles Augustus Milverton," II, p. 563.
136. *Ibid.*, p. 570.
137. "The Adventure of the Blue Carbuncle," I, p. 467.
138. "The Adventure of Charles Augustus Milverton," II, pp. 562-63. Holmes commonly obtains information from servants, especially the investigated subject's ex-

employees, for Holmes noted that for information "there are no better instruments than discharged servants with a grievance." "The Adventure of Wisteria Lodge," II, p. 253.

139. "A Scandal in Bohemia," I, p. 356.

140. E.g., in "The Adventure of the Bruce-Partington Plans" (II, p. 449), Holmes planted a false notice in the "agony columns" to get the villain to reveal himself.

141. "The Adventure of the Six Napoleons," II, p. 580.

142. "The Adventure of the Copper Beeches," II, pp. 121-22.

143. "The Adventure of Wisteria Lodge," II, p. 259.

144. *Ibid.*, p. 238.

145. "The Red-Headed League," I, p. 419.

146. "The Naval Treaty," II, p. 179.

147. "The Problem of Thor Bridge," II, p. 600.

148. "The Adventure of Wisteria Lodge," II, p. 252.

149. "The Adventure of the Speckled Band," I, p. 257.

150. "The Final Problem," II, p. 303.

151. "The Adventure of the Empty House," II, p. 347.

152. Holmes apparently accepted the common stereotype of Caucasians that black people have extraordinary body odor for on one occasion he tells the black bruiser Steve Dixie, "I don't like the smell of you," and on another he snidely referred to looking for his scent-bottle. "The Adventure of the Three Gables," II, pp. 723 and 728. Holmes also seems to have accepted an anti-Semitic stereotype for he referred to a client in debt by saying that "He is in the hands of the Jews." "The Adventure of Shoscombe Old Place," I, p. 637.

153. "A Study in Scarlet," I, p. 154.

154. "The Adventure of the Devil's Foot," II, p. 514.

155. "The Adventure of the Mazarin Stone," II, p. 737.

156. "The Hound of the Baskervilles," II, p. 106.

157. "The Adventure of the Empty House," II, p. 348.

158. "The Adventure of the Norwood Builder," II, pp. 425-26.

159. "The Naval Treaty," II, p. 183.

160. "The Hound of the Baskervilles," II, p. 22.

161. "A Case of Identity," I, p. 414.

162. "The Reigate Squires," I, p. 342.

163. *Ibid.*, p. 341.

164. "The Gloria Scott," I, p. 115.

165. "The Valley of Fear," I, p. 473.

166. "A Study in Scarlet," I, pp. 178-79.

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