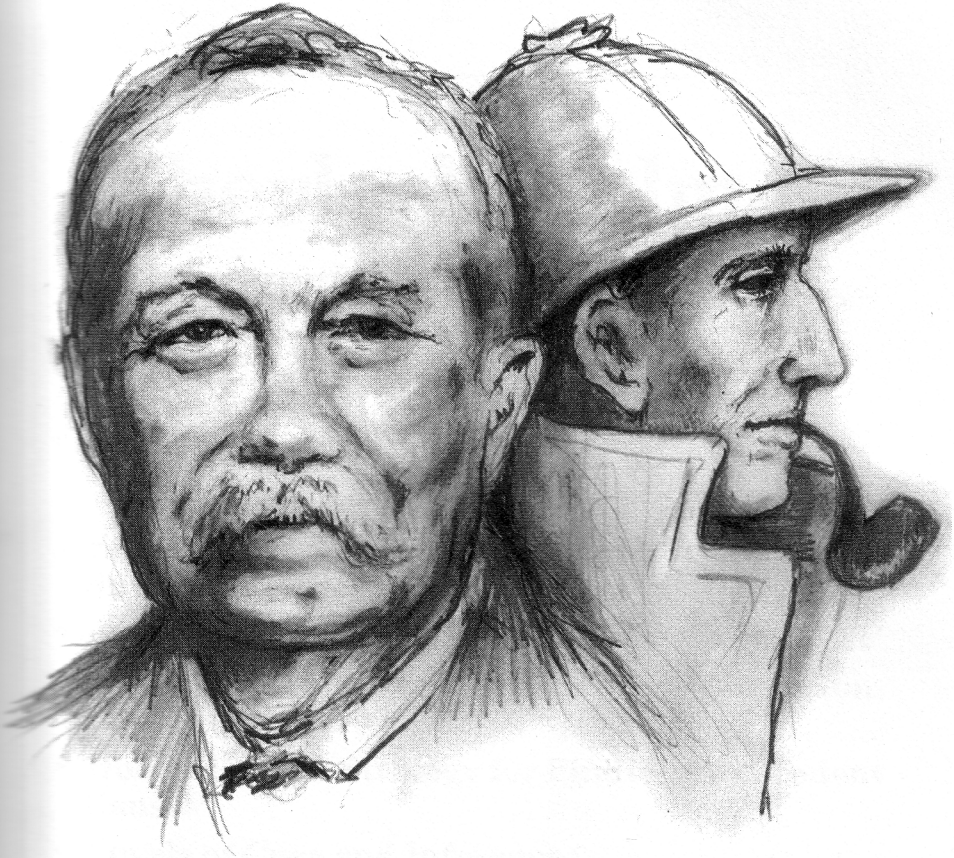

Sir Arthur Conan Doyle's
Sherlock Holmes

Chapter 2

Sherlock Holmes

Uncovering the Mysteries of Genius

Overview of Chapter 2

- **Sherlock Holmes: An Example of Applying Strategies of Genius**
- **Holmes' Meta Strategy and 'The Great Chain of Life'**
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SHERLOCK HOLMES
An Example of Applying Strategies of Genius

Identifying the thinking process of a particular individual is a lot like detective work. This is especially the case with people who are not physically present or no longer living. Most of what we have to work with is in the form of clues left by those individuals in their writings and in the products or expressions of their thinking. We must work backwards from these clues to deduce the structure of the mental process which produced them.

It is fitting on a number of levels that Sir Arthur Conan Doyle's Sherlock Holmes be included in this series. First of all, as a fictitious character, Holmes represents a good example of the purpose of identifying strategies of genius to begin with: to model an exceptional thinking process and apply it to contexts other than one in which it was initially developed. Conan Doyle (1859-1930) modeled the methods and mannerisms of the great detective from one of his medical school professors, Dr. Joseph Bell of Edinburgh. Conan Doyle so admired his teacher's abilities to detect and diagnose medical problems that he fantasized about how the processes of this 'medical detective' could be applied to actual detective work. The result was Sherlock Holmes.

Sherlock Holmes' popularity and appeal comes from the way he thought. What makes Holmes special is his strategy for approaching a problem - his ability to observe, think and, perhaps most importantly, to be aware enough of his own process such that he can describe and explain it to someone else. Conan Doyle succeeded in being able to robustly capture the thinking process of his teacher and apply it to the interesting and exceptional contexts that made up Holmes' adventures.

Thus, while Holmes' character and adventures are fictitious, his thought process is authentic. The fact that he is imaginary only highlights the point that a particular strategy may be applied across many content areas, actual or simulated. It is important to keep in mind that this study of the cognitive strategies of genius is not about objective reality but about enriching subjective experience. This exploration of genius is about the structure of our inner models of the world, not the objective nature of the world. In fact, most acts of genius involve pushing or extending the perceived boundaries of our existing models of reality.

On another level, Holmes' particular area of genius is a metaphor for the task of uncovering the mysteries of the thought processes of genius. Using the cognitive modeling tools of Neuro-Linguistic Programming, we are attempting to be a kind of Sherlock Holmes of the mind. In that respect, his way of approaching a problem can provide some insights into the principles and skills that may be useful in accomplishing that task. At the same time, we are also attempting to be a Watson and chronicle that which we have discovered and experienced.

Holmes' Meta Strategy and 'The Great Chain of Life'

In the very first Holmes book, *A Study in Scarlet*, Conan Doyle gives us a hint about the 'meta strategy' through which Holmes viewed the problem space in which he worked. Watson is visiting Holmes for the first time and reports:

> *I picked up a magazine from the table and attempted to while away the time with it, while my companion munched silently at his toast. One of the articles had a pencil mark at the heading, and I naturally began to run my eye through it.*
>
> *Its somewhat ambitious title was "The Book of Life," and it attempted to show how much an observant man might learn by an accurate and systematic examination of all that came in his way. It struck me as being a remarkable mixture of shrewdness and absurdity. The reasoning was close and intense, but the deductions appeared to me to be far fetched and exaggerated. The writer claimed by a momentary expression, a twitch of a muscle or a glance of an eye, to fathom a man's innermost thoughts. Deceit, according to him, was an impossibility in the case of one trained to observation and analysis. His conclusions were as infallible as so many propositions of Euclid. So startling would his results appear to the uninitiated that until they learned the processes by which he had arrived at them they might well consider him a necromancer.*
>
> *'From a drop of water,' said the writer, 'a logician could infer the possibility of an Atlantic or a Niagara 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.'*[1]

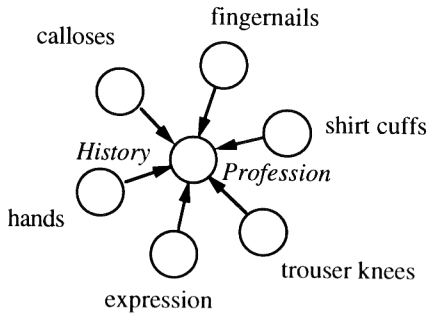
The article, Watson discovers, was written by Holmes. The title *The Book of Life* suggests that, like all geniuses, Holmes cast his endeavors inside the framework of an ambitious and ceaseless mission to uncover more of the deeper principles expressed in the phenomena of life. Holmes views 'life' as an interconnected system, a "great chain, the nature of which is known whenever we are shown a single link of it." Each part of the system carries information about all of the parts of the system - somewhat like a hologram, in which the whole image is spread to each piece of the hologram. This belief seems to be an important part of Holmes' strategy for investigation. Holmes' form of 'analysis and deduction' are an expression of the belief that a part of any system is an expression of the whole. As he maintained:

> *"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."*[2]

Holmes' claim that a "momentary expression, a twitch of a muscle or a glance of an eye" can give us insight into a person's "innermost thoughts" is particularly relevant to our study. The implication is that even in seemingly trivial behaviors there are clues to what and how a person is thinking. Holmes claims that this ability is a learnable skill that may be acquired by study but that to someone unfamiliar with these skills it would appear that the person who has developed them would be a magician or "necromancer." In his article, Holmes provides some advice about how to go about acquiring this skill.

'Before turning to those moral and mental aspects of the matter which present the greatest difficulties, let the inquirer begin by mastering more elementary problems. Let him, on meeting a fellow-mortal, learn at a glance to distinguish the history of the man, and the trade or profession to which he belongs. Puerile as such an exercise may seem, it sharpens the faculties of observation, and teaches one where to look and what to look for. By a man's finger-nails, by his trouser-knees, by the callosities of his forefinger and thumb, by his expression, by his shirt-cuffs - by each of these things a man's calling is plainly revealed. That all united should fail to enlighten the competent inquirer in any case is almost inconceivable.'[3]

Holmes gives us a first insight into some key elements of his strategy when he describes his exercise in observation. The macro structure of his strategy involves the process of gathering a number of minor elements together to form a gestalt. By looking at a series of details, such as finger-nails, trouser-knees, callosities of the forefinger and thumb, expression, shirt-cuffs, etc., Holmes is able to infer what they would indicate "all united." While most people either ignore details or get caught up in them, Holmes is able to step back and see what they indicate as a totality. He is able to infer the characteristic of the whole forest by looking at the individual trees.



System of Cues 'Uniting' to Form a Conclusion

In fact, Holmes claimed that *"It has long been an axiom of mine that the little things are infinitely the most important,"* [4] and that his method was *"founded upon the observation of trifles,"* [5] concluding that *"To a great mind, nothing is little."*[6]

It is significant that Holmes suggests the observation of "fellow-mortals" as the starting place to develop the skills to comprehend the 'great chain' of life. While Holmes' genius is usually related to solving crimes and mysteries, it is important to remember that this ability derives from skill acquired by "mastering more elementary problems" - the observation of people. As Holmes explains to Watson:

"Observation with me is second nature. You appeared to be surprised when I told you, on our first meeting that you had come from Afghanistan."

"You were told, no doubt."

"Nothing of the sort. I knew you came from Afghanistan. From long habit the train of thought ran so swiftly through my mind that I arrived at the conclusion without being conscious of the intermediate steps. There were such steps, however. The train of reasoning ran, 'Here is a gentleman of a medical type, but with the air of a military man. Clearly an army doctor, then. He has just come from the tropics, for his face is dark, and that is not the natural tint of his skin, for his wrists are fair. He has undergone hardship and sickness, as his haggard face says clearly. His left arm has been injured. He holds it in a stiff and unnatural manner. Where in the tropics could an English army doctor have seen much hardship and got his arm wounded? Clearly in Afghanistan.' The whole train of thought did not occupy a second." [7]

Here, Holmes gives a more specific description of some of the micro aspects of his strategy and offers us another

insight into the nature of his genius - his ability to be aware of and reconstruct the "intermediate steps" of his "train of reasoning." Holmes' comment that, "From long habit the train of thought ran so swiftly through my mind that I arrived at the conclusion without being conscious of the intermediate steps," highlights one of the biggest problems in identifying the strategies of geniuses - the key mental processes have become so habitual and subtle that they take place outside of conscious awareness.

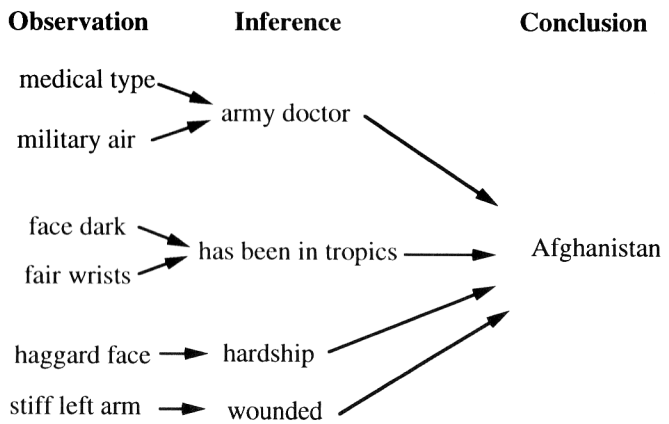
In other words, *the more one develops the ability to actually do something well, the less one is aware of* ***how specifically*** *one is doing it.* When they are in the act of accomplishing a task, people focus on *what* they are doing and not the subtle mental processes by which they are doing it. Thus, most effective behavior is characterized by 'unconscious competence'. While this reduces the amount of conscious effort one has to put into achieving a goal, it makes it difficult to describe to others how to develop the same degree of competence. Furthermore, people often downplay critical steps in their own thinking process as being 'trivial' or 'obvious' without realizing that those seemingly unimportant images, words or feelings that they are taking for granted are exactly what someone else might need to know how to perform the mental strategy.

Holmes' ability to be aware of his own thought process is called *meta-cognition;* which should be distinguished from 'self consciousness'. Unlike self consciousness, meta-cognition does not come from a seemingly separate 'self' who judges and interferes with the process under observation. Meta-cognition involves only the awareness of the steps of one's thought process. As Holmes demonstrates, meta-cognition will often only reach consciousness *after* the thought process is completed.

The value of meta-cognition is that, by making you aware of how you are thinking, it allows you to constantly validate or correct your inner thinking strategies. In fact, Holmes

claimed that his genius was *"but systematized common sense."*[8] To use a computer analogy for a moment, most of the time a computer user does not see nor care about the programs that are making the computer function. But if you want to improve the functioning of the computer, "fix a bug" in its functioning or translate the program for a different type of computer, you need to be able to view and trace the set of instructions that make up the program.

What we learn from Holmes' description is that his process does indeed involve a "train of reasoning" as well as observation. Holmes does not simply observe a bunch of details and draw a conclusion. Rather, he makes inferences from relationships brought out through combinations of observations. That is, he does not simply look at somebody's skin color and deduce that they have been in the tropics. He looks at the relationship between the tint of his face and the tint of his wrists and infers that it is not the natural skin color, then he makes the conclusion that the person has been in the tropics. The conclusion is not in fact drawn from the observations themselves but from the cluster of inferences arrived at by linking certain observations together. A group of inferences is first drawn from observations of behavioral and environmental details and a conclusion is then drawn from the inferences.

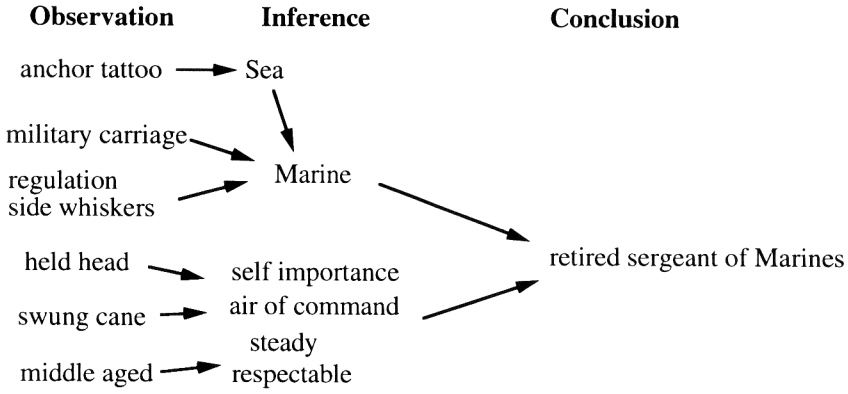


Drawing Inferences From a Cluster of Observations

The process of drawing an inference from the perception of a cluster of details is what Holmes considered "observation," not simply the act of perceiving the details. As he said to Watson, *"You see but you do not observe."*[9] In *A Study In Scarlet* Holmes demonstrates and describes some of the micro aspects of his strategy again when he correctly deduces the background of a man who has come to see him as a client and whom he has never before met.

> *How in the world did you deduce that [he was a retired sergeant of Marines]?*
>
> *Even across the street I could see a great blue anchor tattooed on the back of the fellow's hand. That smacked of the sea. He had a military carriage, however, and regulation side whiskers. There we have the marine. He was a man of some amount of self-importance and a certain air of command. You must have observed the way in which he held his head and swung his cane. A steady, respectable, middle-aged man, too, on the face of him - all facts which lead me to believe that he had been a sergeant.*[10]

In this example we again find Holmes linking together observations to make inferences and linking together inferences to make a conclusion. This process represents an example of what might be called *"convergent thinking"* - that is, inferences are linked and synthesized together, moving from the general to the specific, to form a single result.



Forming a Conclusion from Observation and Inference

Holmes' Micro Strategies for Observation, Inference and Deduction

Clearly, Holmes' ability requires more than simply looking at details. As he himself points out, it is more than seeing. He 'deduces' his conclusions by relating observations and inferences to one another. In both this example with the marine sergeant and in his first encounter with Watson, Holmes first looks for clues from which he can infer the general characteristics of a person (i.e., the elderly fellow was a marine, and Watson was an army doctor) which he then combines with other observations and more specific inferences to draw his conclusion (i.e., the elderly gentleman had an air of self importance and command, and Watson had been in the tropics and had been wounded).

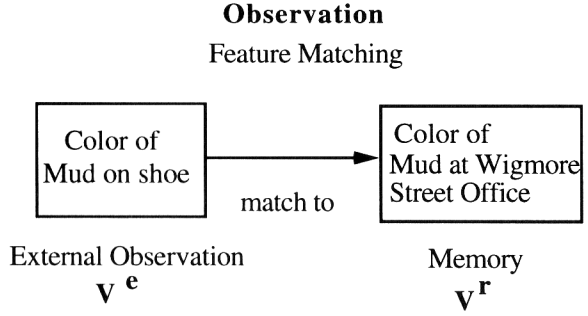
To do this, Holmes combines two processes: 1) noticing and giving meaning to externally perceived details and 2) synthesizing a cluster of meanings into a conclusion. He claimed that there should be *"no combination of events for which the wit of man cannot conceive an explanation."*[11]

In *The Sign of Four*, Holmes clearly distinguishes and describes the relationship between his two micro strategies of *observation* and *deduction.*

> *But you spoke just now of observation and deduction. Surely the one to some extent implies the other."*
>
> *"Why, hardly," he answered, leaning back luxuriously in his armchair and sending up thick blue wreaths from his pipe. "For example, observation shows me that you have been to the Wigmore Street Post-Office this morning, but deduction lets me know that when there you dispatched a telegram."*
>
> *"Right!" said I. "Right on both points! But I confess that I don't see how you arrived at it. It was a sudden impulse upon my part, and I have mentioned it to no one."*

> *"It is simplicity itself," he remarked, chuckling at my surprise - "so absurdly simple that an explanation is superfluous; and yet it may serve to define the limits of observation and deduction. Observation tells me that you have a little reddish mold adhering to your instep. Just opposite the Wigmore Street Office they have taken up the pavement and thrown up some earth which lies in such a way that it is difficult to avoid treading in it in entering. The earth is of this peculiar reddish tint which is found, as far as I know, nowhere else in the neighbourhood. So much is observation. The rest is deduction."*
>
> *"How, then did you deduce the telegram?"*
>
> *"Why, of course, I knew that you had not written a letter, since I sat opposite to you all morning. I see also in your open desk there that you have a sheet of stamps and a thick bundle of postcards. What could you go into the post-office for, then, but to send a wire? Eliminate all other factors, and the one which remains must be the truth."*[12]

In the terms of NLP, Holmes' micro strategy for *observation* involves linking a feature, visually input from his ongoing external environment, to inner memories. This is done by matching features of what he is seeing in his external environment to features of remembered situations and events. In the example above the feature is the color of the mud.



Holmes' Micro Strategy for Observation

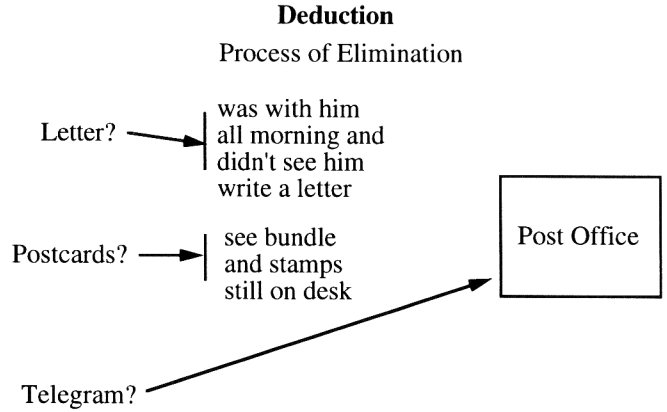
In the model of NLP, this is a significant aspect of Holmes' strategy. In NLP a distinction is made between the *form* and the *content* of our experience. Shoes and mud are examples of content - the objects of our perception. Color is a formal quality that can apply across many contents. Color is the formal feature through which Holmes is able to associate and link his ongoing sensory experience with other experiences in his memory.

To observe, Holmes clearly relies on the visual representational system. Color is one of a number of features of vision that we have previously identified as 'submodalities'. Each of our sensory representational systems registers objects and events in terms of such features. In addition to color, our sense of sight, for instance, registers size, shape, brightness, location, movements, etc. The auditory representational system senses sounds in terms of features such as volume, tone, tempo and pitch. The kinesthetic system represents feelings in terms of intensity, temperature, pressure, texture and so on.

Unlike the average person, when Holmes is observing he pays more attention to the more formal qualities of what he is observing than to the content of his observation (the

"incidental objects of sense"). While submodalities could be considered 'details' in a way, they are actually not just a smaller piece of an experience but rather a more abstract and formal feature of the object under observation. By extracting key features and using them as his basis for a memory search, Holmes is open to a wider variety of associations than someone who simply sees "mud."

Holmes description of his micro strategy for *deduction* indicates that it is primarily a 'process of elimination'. While Holmes' strategy for observation involves connecting a particular perception to other contexts and events through matching features, his strategy for deduction is oriented towards paring down the potential possibilities his observation has suggested in order to reach a single conclusion.



Holmes' Micro Strategy for Deduction

This deduction is accomplished by *imagining* or *inferring* other effects on the environment that a particular behavioral path would have to be made and then checking for the confirmation or absence of these effects in the environment. In order to have mailed a letter, Watson would have had to

have written a letter. If Watson had gone to mail a postcard then he would have taken the stack of postcards on his desk.

As Holmes points out to Watson:

> *"If you can say definitely, for example, that some murder had been done by a man who was smoking an Indian lunkah, it obviously narrows your field of search. To the trained eye there is as much difference between the black ash of a Trichinopoly and white fluff of bird's-eye as there is between a cabbage and a potato."*
>
> *"You have an extraordinary genius for minutiae," I remarked.*
>
> *"I appreciate their importance."*[13]

Holmes' process of deduction seems to rely heavily on the visual representational system. He uses visual memories or external observations that appear to be prompted or connected by verbal statements or questions. He certainly does not mention feelings or emotions as being a part of his strategy. In fact he stated, *"I use my head, not my heart,"*[14] and claimed that *"The emotional qualities are antagonistic to clear reasoning."* [15]

Watson's descriptions of Holmes *"staring at the ceiling with dreamy, lack-lustre eyes"*[16] while he was deep in thought also reflect the behavioral cues associated with visualization in NLP. The eyes oriented upward and defocused is considered to be the classic visual 'accessing cue' according to NLP. Such a posture would be indicative of deep internal visual processing.

Holmes' Macro Strategy for Finding 'Antecedent Causes'

Putting together the information we have gathered about Holmes' micro strategies for observation and inference, we can form a general idea of his basic macro strategy. It would appear that Holmes had a very highly developed strategy for finding what Aristotle called 'antecedent' or "precipitating' causes - past events, actions or decisions that influence the present state of a thing or event through a linear chain of 'action and reaction'.

The essential steps in Holmes' macro strategy for identifying antecedent causes seem to be:

1. Use observation to determine the effect of events on the environmental context.

2. Use inference to determine the possible behaviors that could have led to those environmental effects.

3. Use deduction to reduce the possible paths of behavior to a single probability.

As Holmes put it,

> *"It is an old maxim of mine, that when you have eliminated the impossible, whatever remains, however improbable, must be the truth."*[17]

In the language of NLP, Holmes isolates certain key features of the *present state* of an event (i.e., color of mud on Watson's shoe) and uses them to make inferences about a possible *previous state* (i.e., Watson was at Wigmore Street Post Office because the color of mud is the same). Then he imagines possible combinations of *behavioral operations* which could have caused that previous state to occur (i.e., mailing a

letter, mailing postcards, sending a telegram). He then uses other observations to confirm or reject the various possible behavioral paths (i.e., Watson did not write a letter that morning, a stack of postcards was still on his desk).

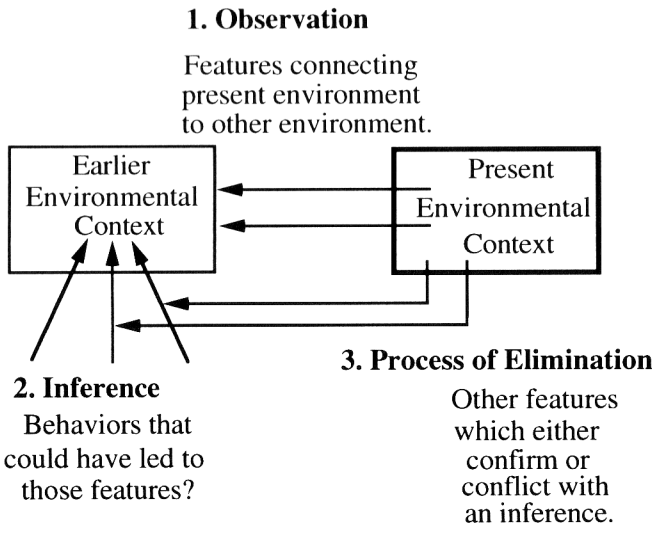


Diagram of Holmes' Basic Strategy for Deduction

There is one very important part of Holmes strategy, however, that he never mentions - how he determines what could be called the *problem space* within which to work. A problem space is defined by the parts of a system one considers to be relevant to the problem. What you consider the space of a problem to be will determine what kind of states you look for and how you define them. In order to draw an inference about a previous state, you must make *assumptions* about the problem space in which you are operating. One's definition of and assumptions about a problem space will influence and will be influenced by a number of key elements of problem solving:

1. *Interpretation of the meaning of an input or event.*

Interpretations in the form of inferences or conclusions involve connecting and fitting a particular input or event into other frameworks. For instance, in order for Holmes to conclude that Watson had been in Afghanistan after he had inferred that Watson was an army doctor with a tan and a wound, he had to have some knowledge of contemporary world events - in particular, recent British military campaigns. Holmes would not have drawn the same conclusion in today's world if he met a tan and wounded British Doctor. Likewise, in order for Holmes to perceive Watson as being a "medical type" with a "military air" or to recognize "regulation side whiskers" on the retired marine sergeant he had to attach his observations to certain assumptions. Many of Holmes inferences are based upon assumptions about cultural habits and attitudes and knowledge about context. The difficulty with this is that assumptions may be valid only within a narrow social or historical scope. This can make interpreting the meaning of clues and events subject to a lot of potential variation. As Holmes himself pointed out, *"Circumstantial evidence is a very tricky thing. It may seem to 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."*[18]

2. *Completeness / thoroughness of coverage of the problem space.*

Since everyone must make assumptions in order to give something meaning, we might ask, 'How does one minimize problems brought about by inappropriate assumptions or mistaken interpretations?' Holmes appears to apply the correct assumptions more often than his colleagues. How does he do it? One answer relates to how thoroughly one covers the total possible problem space. In his comment about circumstantial evidence, Holmes implies that there are multiple perspectives which can be taken. Perspective is one key element of problem space. Time frames are another.

Perceiving events from different time frames can change the implications that they have. Perhaps one reason that Holmes outperforms his peers and competitors is that he is simply more complete in his coverage of the possible perspectives and time frames that could be part of a particular problem space. In Holmes' words, *"One tries test after test until one or other of them has a convincing amount of support."*[19]

3. *Order in which problem features / elements are attended to.*

The sequence in which one makes observations and inferences can also influence the conclusion one draws - especially when inferences are being drawn from one another. Some inferences are not possible to make unless others have already been made. Holmes' use of the description "train of thought" implies a kind of sequence in which there is a logical dependency between each of the elements. As Holmes pointed out, *"When a fact appears to be opposed to a long train of deductions, it invariably proves to be capable of bearing some other interpretation."* Sequence is implicit in the concept of a 'strategy'. We have already identified a macro level sequence to Holmes process involving first observation, followed by inference and then finally deduction. On a more micro level, Holmes appears to initially pay attention to clues that would give him contextual information and then detail the actions or events that have taken place within that context.

4. *Priority given to problem elements / features.*

While Holmes appreciates the importance of "minutiae" he does not value all of them equally. In addition to sequence, the priority or emphasis given to various clues or elements determines their influence in shaping an inference or conclusion. As Holmes points out, *"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 are vital.*[20] Clearly, Holmes emphasizes the importance of different clues depending on his perception of their relevance to what he is investigating. For instance, certain clues give more indications about the character of a person, others give more information about the recent behaviors of a person, others are more priorital in determining what environment someone has recently been in.

5. *Additional knowledge about the problem from sources outside the problem space.*

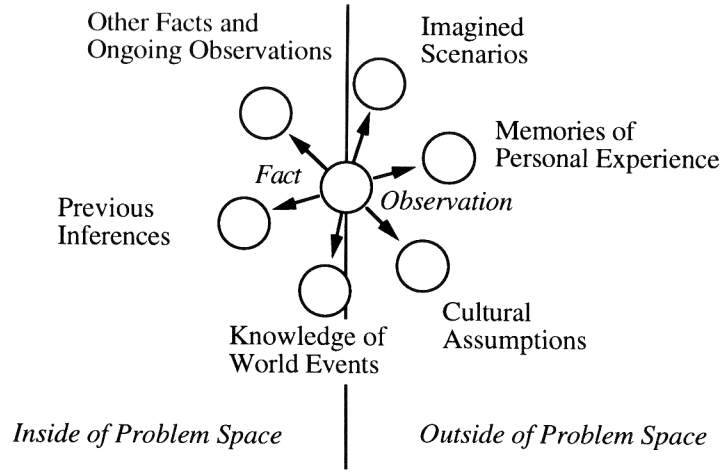
The assumptions used to give meaning to clues and features are often derived from information that comes from knowledge brought to bear on a particular problem from frameworks or sources not directly related to the problem space. Holmes used not only knowledge about cultural patterns and world events but also relatively obscure and sometimes esoteric knowledge to make inferences and draw conclusions. He maintained, *"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."*[21]

6. *Degree of Involvement of Fantasy and Imagination*

Another source of knowledge that originates outside of a particular problem space is *imagination*. Holmes often utilized his imagination to make inferences, claiming that his methods were based on a *"mixture of imagination and reality"*[22] and that he employed *"the scientific use of the imagination."*[23] For instance, in the case of *Silver Blaze* Holmes is able to locate a lost race horse by imagining what a horse might do if it were alone on the English moors and then looking for confirmation of his imaginary scenario in the environment. He tells Watson, *"See the value of imagination...We imagined what might have happened, acted upon the supposition, and find ourselves justified."* [24] Holmes' use of his imagination seems to be a complementary process to deduction. While problem solving based on deduction

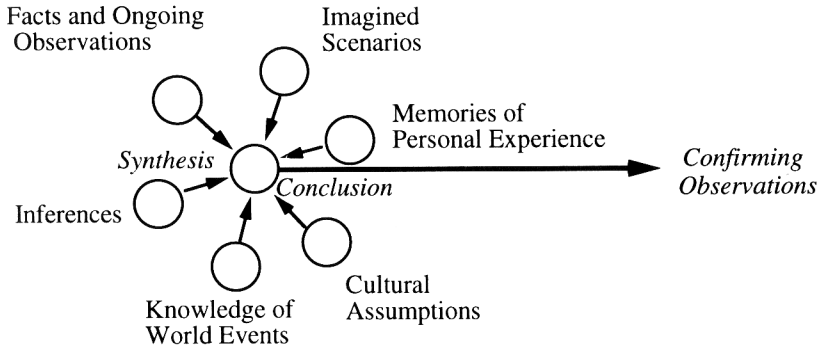
employs observations to eliminate possible pathways, problem solving based on imagination employs observations to confirm a supposed scenario.

In general, Holmes' macro strategy is to connect particular observations to a number of frameworks both inside and outside of the scope of the problem space he is addressing.



Holmes' Macro Strategy for Exploring a Problem Space

This creates an enriched problem space which gives priority and meaning to observations and inferences. Holmes then synthesizes this information together into a single conclusion which is confirmed by other observations or a group of suppositions that is reduced to a single possibility through a process of elimination. Holmes emphasized the importance of this last step when he pointed out that so often *"Insensibly one begins to twist facts to suit theories, instead of theories to suit facts."*[25]



Synthesizing Information About a Problem Space to Reach a Conclusion

A good example of this strategy comes from the *Sign of Four* in which Holmes is able to draw a number of conclusions about Watson's brother from examining his watch.

> *"I have heard you say it is difficult for a man to have any object in daily use without leaving the impress of his individuality upon it in such a way that a trained observer might read it. Now, I have here a watch which has recently come into my possession. Would you have the kindness to let me have an opinion upon the character or habits of the late owner?"*
>
> *...He balanced the watch in his hand, gazed hard at the dial, opened the back, and examined the works, first with his naked eyes and then with a powerful convex lens. I could hardly keep from smiling at his crestfallen face when he finally snapped the case to and handed it back.*
>
> *"There are hardly any data," he remarked. "The watch has been recently cleaned, which robs me of my most suggestive facts."*

"You are right." I answered. "It was cleaned before being sent to me."

"Though unsatisfactory, my research has not been entirely barren," he observed, staring at the ceiling with dreamy, lack-lustre eyes. "Subject to your correction, I should judge that the watch belonged to your elder brother, who inherited it from your father."

"That you gather, no doubt, from the H. W. upon the back?"

"Quite so. The W. suggests your own name. The date of the watch is nearly fifty years back, and the initials are as old as the watch: so it was made for the last generation. Jewelry usually descends to the eldest son, and he is most likely to have the same name as your father. Your father has, if I remember right, been dead many years. It has, therefore, been in the hands of your eldest brother."

"Right, so far," said I. "Anything else?"

"He was a man of untidy habits - very untidy and careless. He was left with good prospects, but threw away his chances, lived for some time in poverty with occasional short intervals of prosperity, and finally, taking to drink, he died. That is all I gather."

I sprang from my chair and limped impatiently about the room with considerable bitterness in my heart.

"This is unworthy of you, Holmes," I said. "I could not have believed that you would have descended to this. You have made inquiries into the history of my unhappy brother, and now you pretend to deduce this knowledge in some fanciful way. You cannot expect me to believe that you have read all this from his old watch! It is unkind and, to speak plainly, has a touch of charlatanism in it."

"My dear doctor," said he kindly, "pray accept my apologies. Viewing the matter as an abstract problem, I had forgotten how personal and painful a thing it might be to you. I assure you, however, that I never even knew you had a brother until you handed me this watch."

"Then how in the name of all that is wonderful did you get these facts? They are absolutely correct in every particular."

"Ah, that is good luck. I could only say what was the balance of probability. I did not at all expect to be so accurate."

"But it was not mere guesswork?"

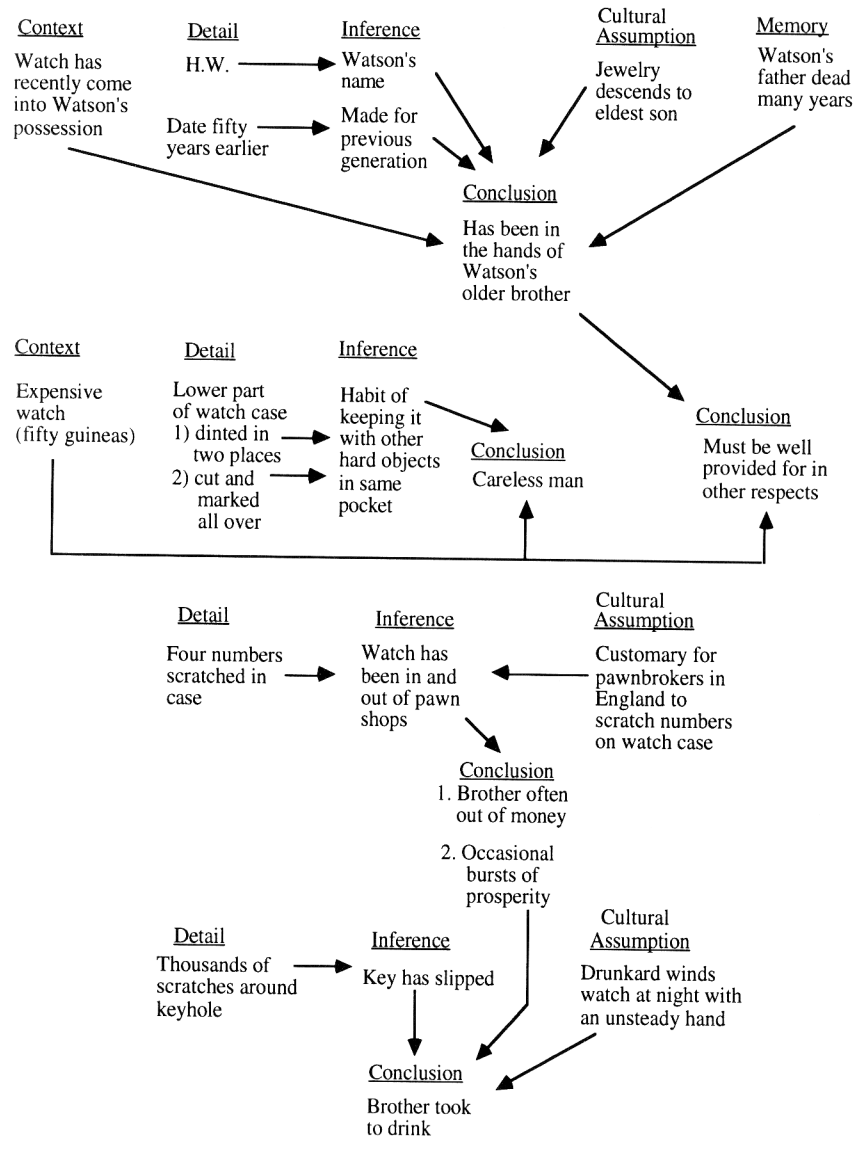
"No, no: I never guess. It is a shocking habit - destructive to the logical faculty. What seems strange to you is only because you do not follow my train of thought or observe the small facts upon which large inferences may depend. For example, I began by stating that your brother was careless. When you observe the lower part of that watch-case you notice that it is not only dinted in two places but it is cut and marked all over from the habit of keeping other hard objects, such as coins or keys, in the same pocket. Surely it is no great feat to assume that a man who treats a fifty-guinea watch so cavalierly must be a careless man. Neither is it a very far-fetched inference that a man who inherits one article of such value is pretty well provided for in other respects."

I nodded to show that I followed his reasoning.

"It is very customary for pawnbrokers in England, when they take a watch, to scratch the numbers of the ticket with a pin-point upon the inside of the case. It is more handy than a label as there is no risk of the

number being lost or transposed. There are no less than four such numbers visible to my lens on the inside of this case. Inference - that your brother was often at low water. Secondary inference - that he had occasional bursts of prosperity, or he could not have redeemed the pledge. Finally, I ask you to look at the inner plate, which contains the keyhole. Look at the thousands of scratches all round the hole - marks where the key has slipped. What sober man's key could have scored those grooves? But you will never see a drunkard's watch without them. He winds it at night, and he leaves these traces of his unsteady hand. Where is the mystery in all this?"[26]

In this example, Holmes demonstrates how he synthesizes associations from a number of different frameworks to build a characterization of Watson's unfortunate brother. Holmes pieces together contextual information with cultural assumptions and his own personal memories to provide a rich space in which to give meaning to the seemingly trivial details he has observed on the watch.



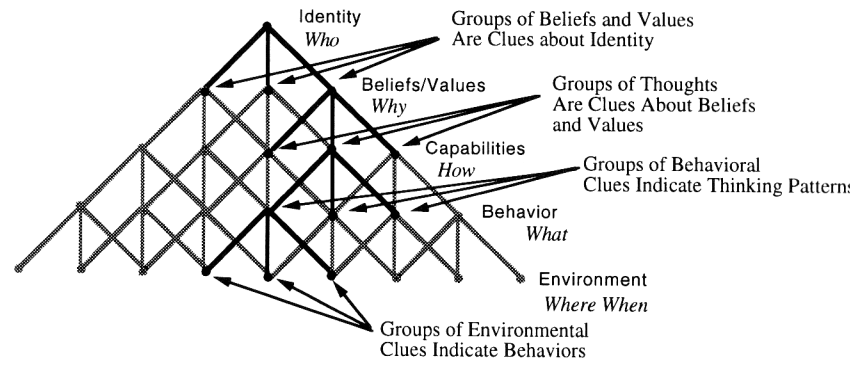
Synthesis of Contextual Information and Cultural Assumptions to Form Conclusions

Levels of Cues and Inferences

Holmes strategy for inferring behavioral and personality characteristics from an object in the possession of Watson's brother provides some interesting parallels to the goal of determining the thinking strategies of geniuses from the clues they have left behind. In modeling an individual, there are a number of different aspects, or levels, of the various systems and subsystems in which that person operated that we may explore. We can look at the historical and geographical *environment* in which he or she lived - i.e., *when* and *where* of the person's activity. We can examine his specific *behaviors* and actions - i.e., *what* the person physically did in that environment. We may also look at the intellectual and cognitive strategies and *capabilities* by which the person selected and guided his actions in his environment - i.e., *how* he or she generated these behaviors in that context.

We could further explore the beliefs and values that motivated and shaped the thinking strategies and capabilities that the person developed to accomplish behavioral goals in his or her environment - i.e., *why* the person did things the way he or she did them in those times and places. We could look deeper to investigate a person's perception of the self or identity he or she was manifesting through that set of beliefs, capabilities and actions in that environment - i.e., the *who* behind the why, how, what, where and when.

Holmes seems to have been a master at tracing and applying the interconnections between these levels. Clusters of clues left in the environment tell us about the behaviors that have caused them. Clusters of behaviors are clues about the cognitive processes and capabilities that produce and guide those behaviors. Cognitive strategies and maps are clues about the beliefs and values that shape and motivate them. Clusters of beliefs and values provide clues to the identity and personality at their core.



Relationship Between Different Levels of Cues

For example, in the case of Watson's watch, Holmes puts together cluster of minute environmental clues left on the watch together with contextual and cultural assumptions to infer what behaviors caused these clues. He then synthesizes these behavioral causes together with some other cultural assumptions to converge on a conclusion about the deeper conditions that brought about those behaviors.

Environment	**Behavior**	**Capabilities**	**Beliefs & Values**
Clues	**Causes**	**Conditions**	**Motives**
Where When Lower part of the watch case 1) dinted in two places and 2) cut and marked all over	*What* Habit of keeping it with other hard objects in same pocket	*How* Carelessness	*Why*
Four numbers scratched in case	Watch in and out of pawn shops	Often out of money Occasional Prosperity	
Thousands of scratches by keyhole	Key has slipped	Took to drink	

Examples of Levels of Cues and Inferences

Holmes stops at the level of the 'how', however. He is not able to deduce the beliefs or sense of self that might have created the psychological conditions behind Watson's brother's behavior. And his degree of understanding of the psychological processes behind the behaviors is only very sketchy. Of course, Holmes was not a psychologist. As a detective he had to focus on the concrete behavioral aspects of his cases. Most of the examples we are given in the Holmes stories are about discovering the behaviors that have left their traces in the environment rather than uncovering cognitive strategies.

Yet, Holmes did also claim that a "momentary expression, a twitch of a muscle or a glance of an eye" can give us insight into a person's "innermost thoughts." In *The Adventure of the Cardboard Box*, Holmes provides a powerful example of applying his methods to uncover a "train of thought" in Watson. Instead of inferring behavioral actions ('antecedent causes') from environmental clues, he infers cognitive processes ('final causes') from clusters of behavioral clues.

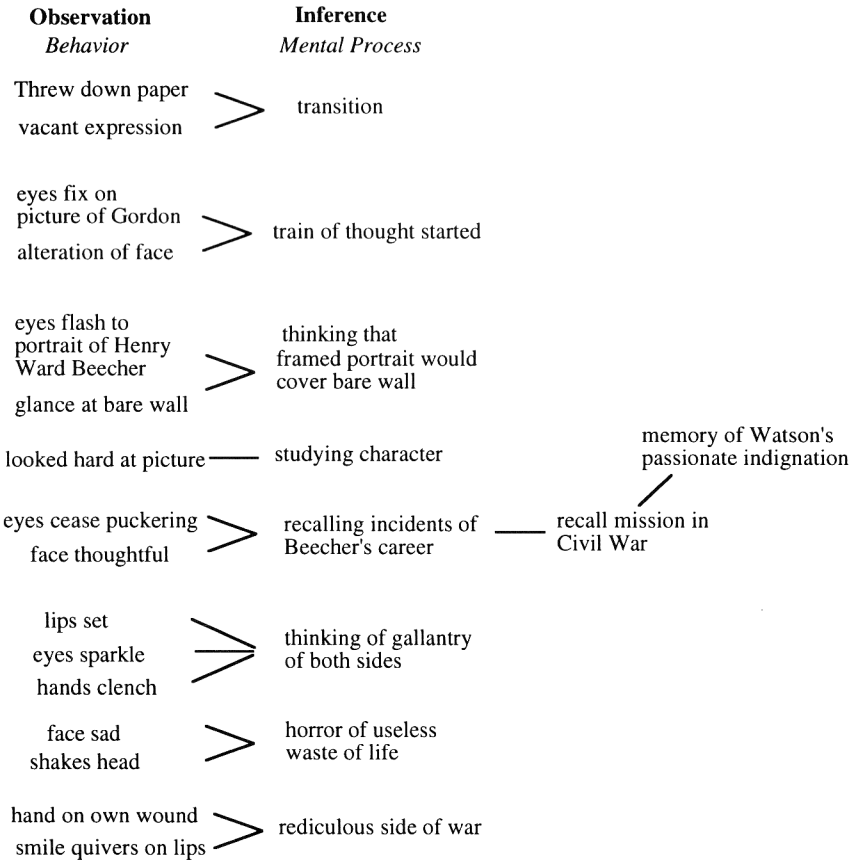
> *Finding that Holmes was too absorbed for conversation I had tossed aside the barren paper, and leaning back in my chair I fell into a brown study. Suddenly my companion's voice broke in upon my thoughts:*
>
> *"You are right, Watson," said he. "It does seem a most preposterous way of settling a dispute."*
>
> *"Most preposterous!" I exclaimed, and then suddenly realizing how he had echoed the inmost thought of my soul, I sat up in my chair and stared at him in blank amazement.*
>
> *"What is this, Holmes?" I cried. "This is beyond anything which I could have imagined."*
>
> *He laughed heartily at my perplexity.*
>
> *"You remember," said he, "that some little time ago when I read you the passage of one of Poe's sketches in which a close reasoner follows the unspoken thoughts of his companion, you were inclined to treat the matter as a mere tour-de-force of the author. On my remarking that I was constantly in the habit of doing the same thing you expressed incredulity."*
>
> *"Oh, no!"*
>
> *"Perhaps not with your tongue, my dear Watson, but certainly with your eyebrows. So when I saw you throw down your paper and enter upon a train of thought, I was very happy to have the opportunity of reading it off, and eventually of breaking into it, as a proof that I had been in rapport with you."*
>
> *But I was still far from satisfied. "In the example which you read to me," said I, "the reasoner drew his conclusions from the reactions of the man whom he observed. If I remember right, he stumbled over a heap of stones, looked up at the stars, and so on. But I have been seated quietly in my chair, and what clues can I have given you?"*
>
> *"You do yourself an injustice. The features are given to man as the means by which he shall express his emotions, and yours are faithful servants."*
>
> *"Do you mean to say that you read my train of thoughts from my features?"*
>
> *"Your features and especially your eyes. Perhaps you yourself recall how your reverie commenced?"*
>
> *"No, I cannot."*
>
> *"Then I will tell you. After throwing down your paper, which was the action which drew my attention to you, you sat for half a minute with a vacant expression. Then your eyes fixed themselves upon your newly framed picture of General Gordon, and I saw by the alteration in your face that train of thought had been*

started. But it did not lead very far. Your eyes flashed across to the unframed portrait of Henry Ward Beecher which stands upon the top of your books. Then you glanced up at the wall, and of course your meaning was obvious. You were thinking that if the portrait were framed it would just cover that bare space and correspond with Gordon's picture over there."

"You have followed me wonderfully!" I exclaimed.

"So far I could hardly have gone astray. But now your thoughts went back to Beecher, and you looked hard across as if you were studying the character in his features. Then your eyes ceased to pucker, but you continued to look across, and your face was thoughtful. You were recalling the incidents of Beecher's career. I was well aware that you could not do this without thinking of the mission which he undertook on behalf of the North at the time of the Civil War, for I remember your expressing your passionate indignation at the way in which he was received by the more turbulent of our people. You felt so strongly about it that I knew you could not think of Beecher without thinking of that also. When a moment later I saw your eyes wander away from the picture, I suspected that your mind had now turned to the Civil War, and when I observed that your lips set, your eyes sparkled, and your hands clenched I was positive that you were indeed thinking of the gallantry which was shown by both sides in that desperate struggle. But then, again, your face grew sadder; you shook your head. You were dwelling upon the sadness and horror and useless waste of life. Your hand stole towards your own old wound and a smile quivered on your lips, which showed me that the ridiculous side of this method of settling international questions had forced itself upon your mind. At this point I agreed with you that it was preposterous and was glad to find that all my deductions had been correct."[27]

Here we find Holmes applying his methods of observation and deduction to decipher subtle behavioral clues in order to uncover the deeper cognitive processes that generated those behaviors. Again Holmes combines clusters of observations with assumptions, context and memory to find a deeper significance in seemingly trivial actions; each step in his sequence of inferences providing the context for his next inference. But rather than having to start with clues left in the environment and to derive the behavior that caused them, Holmes is able to focus on clusters of behavioral clues and infer the mental processes that caused them. He has been able to shift the focus of his strategy up to another level.



Reading a 'Train of Thought' Through Physical Cues

Implementing Holmes' Strategy

The primary fruit of modeling is that we are able to apply what we have learned to develop the processes that we have uncovered from our model in ourselves and others. Let's see how we might develop and implement some of the skills and strategies of Sherlock Holmes in the context of our own lives.

Holmes' strategy basically involves the synthesizing of a cluster of environmental and behavioral clues to form a conclusion out of the whole. This process involves a number of key elements and sub-skills including:

Observation - Matching the features of environmental clues left in one context to characteristics of other contexts.

Assumption - Presupposed knowledge or beliefs about the larger framework or "problem space" in which some clue is occurring. Assumptions determining the meaning or significance of a clue.

Inference - Imagining what kinds of actions could have produced the environmental clues you are examining inside of the problem space you are assuming.

Deduction - Eliminating or confirming possible actions by finding other confirming or disconfirming clues for each possibility.

Meta Cognition - Being introspectively aware of your own thought process, and keeping track of the "trains of thought" that lead to your conclusions.

Observation and Deduction

To begin to think like Holmes, it would make sense to start with his own suggestion to observe someone and attempt to "learn at a glance to distinguish the history of the man, and the trade or profession to which he belongs." Holmes suggests clues such as "finger-nails," "trouser-knees," "callosities of the forefinger and thumb," "expression," "shirt-cuffs," etc., claiming that "by each of these things a man's calling is plainly revealed."

As an exercise, imagine that you are Sherlock Holmes and that you believe "life is a great chain, the nature of which is known whenever we are shown a single link of it." When you meet someone new that you do not know, whether it is at your office, a party, a conference, or some other type of gathering, see if you can tell anything about his or her personal history or profession before you are told. You might even practice by going out to a street corner, an airport or another public place and observing people. Put your observations and inferences together, and draw a conclusion about the profession or background of a person. Then check the accuracy of your guess with the person or someone else who knows him or her.

Keep in mind that Holmes typically brought together clusters of clues to make his inferences. He also started with general characteristics first and then moved to specifics. So look for several cues that might add up to something.

You might first use clues to infer behavior habits and personal history and then combine your inferences with other clues to draw your conclusion about the person's profession. For instance, you may make the inference that a person who is wearing bifocal glasses might need to often switch back and forth between reading and looking at people. Then you might combine that inference with other clues to try to narrow down your guess even more. Once you have made an inference, think of what other cues should accompany it and look for those details which may confirm or eliminate a particular possibility. For example, in what kinds of professions would a person *not* be able to wear bifocals.

In fact, if you find it too difficult to specifically determine a person's profession, start by eliminating professions. That is, you might be able to quickly determine that someone is definitely *not* a police officer, military person or musician. This could be quicker and almost as valuable as the positive identification of a person's profession.

If you can't make out the person's profession, just infer whatever you can about his or her background or history. Is the person married? Right or left handed? What is the person's nationality? Where has the person been recently?

Remember that context, cultural assumptions, personal memory, imagination, etc. play a major role in determining the meaning of various clues. Before trying this exercise, it may be useful to make a list of assumptions and assess the context in which you are observing. Given the type of context you are in, for example, what kind of professional backgrounds are you most likely to find there? There are also probably a number of cultural patterns that may not only help you to interpret your observations but tell you where to focus initially. For instance, in many Western societies, a person who wears a gold ring on the ring finger of their left hand is married; right handed people generally wear their watches on their left wrist and left handed people wear their watches on their right wrist; and so on. There may even be more specific cultural patterns. For instance, there might be different habits of dress for sales executives from Britain versus the United States, Italy or Germany.

Widen your 'problem space' as much as you can. Think of what kinds of clues would tell you whether a person is a doctor, lawyer, accountant, businessperson, construction worker, sales person, musician, off duty police officer, military person on leave, etc. Holmes implies some general categories in his recommendations of possible cues:

"Finger-nails" and the "callosities of the forefinger and thumb" and "expression" would fall into the class of physical and behavioral characteristics associated with a particular profession. Are there any distinguishing behavioral characteristics culturally associated with the different professions listed above? Within your cultural context, for example, would a doctor walk differently than an electronic technician? Particular kinds of posture, tone of voice and vocabulary might be characteristic of certain professions. What sort of reading material would people of different professions carry? Which part of a newspaper would you expect to find them reading? What role does age play in various professions?

"Shirt-cuffs" and "trouser-knees" fall into the category of patterns and characteristics of dress, and the effect of a person's profession on his or her clothing. First, what are the types of clothing people in these different trades or professions would wear, or not wear, in addition to whatever uniforms might be part of the profession? What sort of people might wear jeans or designer clothes? What kinds of watches, glasses, hair styles, ties or tie bars, rings, belt buckles, shoes, pins, 'make up' or jewelry might give you clues? A traveling sales executive might carry a samples case, for instance. Secondly, how might the typical activities a person engages in within their profession affect their clothing? A person who works at a desk all day and leans on his or her elbow might have more wear in that part of his or her jacket.

Also look for details which seem contrary to the context or typical cultural patterns. As Holmes pointed out, *"Singularity is almost invariably a clue."* [28] For example, an adult who is not wearing a wedding ring but is carrying a baby may be a single parent or may be another relative or caregiver.

Regardless of the accuracy of your guesses, develop *metacognition* of your own thought process by keeping track of the train of thought by which you made your conclusion. Use the following table as a guide.

Observations		Assumptions		Inferences	Conclusion
Environmental Details	Behavioral Details	Contextual	Cultural		

After you have finished making your observations and deductions, go back over which environmental and behavioral clues you noticed and combined in order to make your inferences. Notice in what order you combined them and to what degree of priority you gave to the various clues. Also note what contextual and cultural assumptions you made in order to interpret the meaning of these clues. See if you can be aware of any memories or fantasized scenarios you brought into your thought process to create, confirm or eliminate possibilities.

If you draw a conclusion that is only partially correct, backtrack over your thought process and find which inferences were legitimate and which ones were off. If you see a clue that you think should be distinctive, like a certain style of clothing or hair, but you are not able to draw an inference from it, write it down so that you can find out what it means later on.

As an extension of this exercise, ask an acquaintance to give you an object that he or she has been given or inherited that belonged to someone else for a long time and see what you can find out about the previous owner through your observations.

Calibration Exercise

NLP provides specific ways to develop some of Holmes' observational skills, especially in relationship to people. One basic NLP process is known as "calibration." It is a way to use a *"momentary expression, a twitch of a muscle or a glance of an eye"* to gain insight into a person's "innermost thoughts." It involves linking behavioral cues to internal cognitive and emotional responses. Find a partner and try the following exercise together.

1. Ask your partner to think of some concept that your partner feels she or he knows and understands.
2. Observe your partner's physiology closely as if you were Sherlock Holmes for a moment. Watch your partner's eye movements, facial expressions, breathing rate, etc.
3. Then ask your partner to think of something that is confusing and unclear.
4. Once again, watch your partner's eyes and features carefully. Notice what is different between the patterns of features.
5. Now ask your partner to pick either concept and think of it again. Observe your partner's features. You should see traces of one of the clusters of features associated with either understanding or confusion.
6. Make a guess and then check with your partner to find out if you were correct.
7. Have your partner think of other concepts that she or he understands or finds confusing and see if you can guess which category they fall into. Confirm your guess by checking with your partner.
8. As a test of your skill, explain some concept to your partner and determine whether your partner has understood it or is unclear or confused by observing his or features.

Again, use this as an opportunity to develop meta cognition. Keep track of what cues and train of thought led you to your decisions.

Detecting Deceit

According to Holmes deceit was "an impossibility in the case of one trained in observation and analysis." The following exercise combines observational skill with analytical skill and a little imagination. Try it with a partner.

1. Ask your partner to hide a coin in either hand and purposely try to fool you as to which hand it is in.
2. You get to ask five questions of your partner in order to try to determine which hand the coin is in. Your partner must answer all of the questions, but does not have to answer truthfully.
3. After your five questions you must make a guess as to which hand you think the coin is in. Your partner will then open both hands and show you the answer.

Imagine you are Sherlock Holmes and could use your observation and 'calibration' skills to see through your partner's ruse as if you were a human 'lie detector'. The best way to do this is by observing for subtle unconscious cues associated with "yes" and "no" responses. It is generally a good idea to set up your calibration *before* your partner realizes that is what you are doing. For example, when you are explaining the exercise, ask, "Do you understand the instructions?" or "Should we discuss anything else before we begin?" Since your partner will not be trying to fool you at this point, you should see the cues associated with a congruent "yes" or "no" response.

Pay particular attention to cues that your partner will probably not be aware of or cannot consciously manipulate. For instance, if you are an acute observer you might see very subtle responses like skin color changes, pupil dilation, or slight breathing shifts, etc. One helpful principle to apply is what I call the "1/2 second rule" - which is that any response that comes within a half second of your question has prob-

ably not been mediated by your partner's conscious awareness. So focus your attention on the first 1/2 second of the response. Keep in mind that people will be able to infer what you are going to ask before you even complete your question. For instance, if you ask "Are you holding the coin in your right hand?" By the time you have said the word "right," your partner will most likely know unconsciously that your next word will be hand. Consciously, however, your partner will probably wait until the sentence is completed before attempting to mask his or her answer. So you can start observing his or her reactions even before you have finished your sentence.

Remember, Holmes was continually widening the space in which he was operating beyond the accepted immediate context. In addition to observing for the congruence of your partner's reactions to your questions, look at your partner's hands to see if you can tell which hand is subtly squeezing more tightly. You can enrich the problem space still further and increase your chances of getting a congruent answer by bringing associations from outside of the ongoing context. Like Holmes, you can make of use cultural assumptions such as asking, "Is the coin in the hand you hold your fork with?" You may also make use of any memories you can recall, such as, "Is the coin in the hand you opened the door with?" or "Are you holding the coin in the hand that I was holding it in when I gave it to you?" Since your partner will have to direct some of his or her attention to thinking of the experiences you are referring to, it will extend your chances of getting an initial unconscious response that has not been filtered by conscious attention.

You might also try asking Meta Questions - questions *about* the response the person has given you. For instance, after your partner has answered you, ask, "Did you just tell me the truth?" or "Should I believe what you just answered?" Similarly, don't just observe your partner's initial non verbal response to your question, watch your partner's reaction to his or her own answer. Often people will react to their own

answers in a situation that involves as much self consciousness as this exercise. This secondary response might confirm or conflict with the initial answer.

Observing Micro Behavioral Cues Associated with Cognitive Strategies: The B.A.G.E.L. Model

Another application of Holmes' strategies involves combining them with what is known as the B.A.G.E.L. model in NLP. In *The Adventure of the Cardboard Box*, Holmes was able to *"follow the unspoken thoughts of his companion"* by inferring a sequence of mental processes after observing the clusters of micro behavioral clues that accompanied them. The ability to observe behavioral cues that reveal internal cognitive processes is a core skill in NLP and an essential component in our own study of the strategies of genius.

Holmes commented to Watson that a person can "read" your "train of thoughts" from your physical features *"and especially your eyes."* The B.A.G.E.L. model identifies a number of types of behavioral cues, involving one's physical features and one's eyes, that are associated with cognitive processes - in particular, those involving the five senses. B.A.G.E.L. stands for the first letter in a group of English words identifying key categories of behavioral patterns.

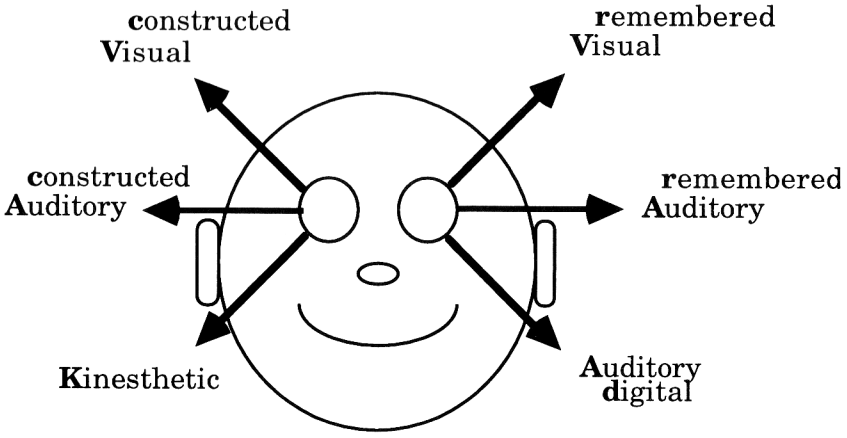
The letter "B" is related to Body posture. Body posture is an important influence and reflection of a person's internal processes. For example, most people would probably find it very difficult to be creative with their head down and their shoulders hunched forward. If you put yourself into that physiology you will find it's going to be difficult to feel inspired. NLP has discovered that when people are visualizing they tend to be in an erect posture. When people are listening, they tend to lean back a bit with their arms folded or head tilted. When people are having feelings, they tend to lean forward and breath more deeply. These cues won't necessarily tell you if the feeling is positive or negative; only that an individual is accessing feelings. So somebody might be feeling very relaxed and have the same general posture as somebody who's feeling depressed.

The letter "A" refers to types of non-verbal Auditory cues. For example, voice tone and tempo can be a very powerful cue. When people are visualizing, they will tend to speak in a slightly higher and faster tone of voice. When people are into feelings, their voices are often lower and slower in tempo. These types of vocal patterns can effect people's states. For example, if someone says in a low slow voice, "Now I want you to watch this complex movement very carefully," you would probably feel more like going to sleep than observing. On the other hand if, someone says, "Okay everybody, really get relaxed and comfortable!" in a very rapid and high pitched voice, you might experience a different kind of incongruity. Voice tone and tempo can serve as a cue to trigger cognitive processes. Attention to the sense of hearing is often triggered by melodic voice changes and fluctuations of tone, tempo and rhythm.

The letter "G" refers to Gestures. People are often gesturing to the sense organ that is most active for them in a moment. People will touch or point to their eyes when they are attempting to visualize something or when they get an insight. People gesture toward their ears when they are talking about something they heard or are trying to hear. Likewise people will touch their mouth when they are thinking verbally (like Rodin's The Thinker). When people touch their chest or stomach it generally indicates feeling.

The letter "E" relates to Eye movements. Eye movement patterns are one of the most interesting micro behavioral cues, and the one most associated with NLP. It has been said that "The eyes are the windows of the soul" In NLP, the eyes are considered a window to the mind. Where a person's eyes are looking can be an important cue. Eyes up tends to accompany visualization. As I mentioned before Watson's descriptions of Holmes *"staring at the ceiling with dreamy, lack-lustre eyes"* describes the classic 'accessing cue' for internal visualizating in the model of NLP. Horizontal movement of the eyes tends to go along with listening. Eyes

down accompany feeling. An eye position to the left hand side is often indicative of memory, while a movement to the right hand side indicates imagination. These cues, summarized in the diagram below, are gone over in more depth in many of the standard books on NLP.



Basic Relationships Between Eye Positions and Cognitive Processes (For a Right Handed Person)

The letter "L" refers to language patterns. As we discussed in the previous chapter on Aristotle, people often give clues or cues about their thinking process through language. For example, somebody might say, "I just *feel* that something is wrong." This statement indicates a different sensory modality (kinesthetic) than somebody who says, "I'm getting a lot of *static* about this idea," (auditory) "Something *tells* me to be careful," (verbal) or "It's very *clear* to me" (visual). Each statement indicates the cognitive involvement of a different sensory modality.

Learning to observe these types of cues can be of immense practical value. In fact, many NLP techniques rely on the observation of these cues in order to be effective. They can

provide you with important information about how another person is thinking - even when that person is not aware of it himself. In addition to being an aid in the process of modeling, they are an important and powerful communication tool that may be used by therapists, managers, teachers, lawyers, salespeople, etc., to better understand (or read) people with whom they are interacting.

As a way to develop this skill, repeat the exercise described earlier in which you 'calibrated' the non-verbal cues of a partner relating to states of confusion and understanding. Ask a partner to again recall examples of concepts or ideas he or she understands or is confused about and follow his or her "unspoken thoughts" by observing the micro behavioral cues identified by the B.A.G.E.L distinctions using the table provided below. Notice what you can tell about the representational modalities your partner is activating with respect to the different concepts of subjects.

	State 1 "Confusion"	State 2 "Understanding"
Posture		
Eye Position		
Breathing		
Micro Movements		

Table For Comparing Non-Verbal Cues Associated With Different Mental States

You can then talk to your partner about the different concepts or subjects and listen to the kinds of language

patterns he or she uses when referring to those different topics or concepts. If your partner uses words like "It is *hazy*," or "I am *unclear*," he or she is probably attempting to visualize them. If, on the other hand, your partner says, "I just can't get a *handle* on it," or "I am unable to *grasp* it," he or she is employing the kinesthetic representational system as a way to try to understand; and so on.

Another way to develop this level of observational acuity is to observe people's memory strategies or decision making strategies. For instance, if you give someone directions, tell a person a telephone number or provide an individual with a piece of information to remember, observe that person's micro behavioral cues as he or she engages in the process of committing the information to memory.

In what way does his or her body posture shift or adjust? Does the person sit up straight? lean back? lean forward? If you are giving directions, for instance, a kinesthetically oriented person may literally orient his or her body in different directions and gesture with his or her hands as that person is listening to you.

Does the person make any unconscious noises like "Hmmm.." or move his or her mouth as if sub-vocalizing. A verbally oriented person may repeat the directions or information several times.

What gestures does the person make, if any? Does he or she touch any part of his or her face? head? body?

Pay special attention to the person's eyes and eye movements. As that person is thinking or recalling, which direction do his or her eyes move? Up? Laterally? Down? What does that tell you about how that person is thinking? If the person looks up and to the right, for instance, he or she may be constructing a visual map of what you are saying. If the person touches his or her face and looks down and to the left, he or she is probably internally verbalizing or repeating what you have been talking about.

What kind of language patterns does the person exhibit as he or she discusses or clarifies the information he or she is to remember? Does the person ask you to repeat the information? write it down? show it to him or her in a book or map?

Like Holmes did with Watson, you may even want to attempt to 'enter' the thoughts of the other person as a proof that you are in 'rapport' with them. For instance, if the person is looking up and appears to be struggling, you can say, "You're right, I have not been clear enough." Or, if the person looks laterally off to the left or right, you can ask, "Will it help if I repeat it more slowly?" If the person looks down and to the right and frowns, you can say something like, "If you're feeling a little overwhelmed I can walk you through it again."

You can practice in a similar way by observing people's unconscious decision making strategies. If you are at a meal with a group of people, for example, observe their micro behavioral cues as they decide what to choose from the menu. Some will attempt to visualize the meal. Others will check their kinesthetic system to determine what "feels right." Others will want to discuss the menu items before choosing. While these details may initially seem like trivial details or 'minutiae' they can provide important insights into people. The unconscious cognitive process by which a person decides what to eat from a menu may reflect other important aspects of that person's decision making strategies and character.

These are types of skills that NLP has actually helped teachers and psychologists to develop in order to provide practical help to people experiencing real challenges and difficulties - such as children with learning problems. As an example, if you observe good spellers, they will almost invariably look up and to the left (visual memory) when they are recalling the spelling of a word. People who have difficulties spelling, such as people who are 'dyslexic', on the other hand, experience great difficulties in forming images of words and almost never look up to the left when they are

spelling. By observing and coaching children to help them develop the appropriate cognitive strategy and supporting behavioral cues, a person can help them to make dramatic improvements in many basic learning skills.

The books ***Tools for Dreamers***, ***Skills For the Future*** and ***NLP Volume I*** provide a number of exercises and methods to help develop your ability to elicit and observe these kinds of cognitive strategies.

Obviously, in our further explorations of genius, the behavioral cues of the B.A.G.E.L. combined with the observational strategies of Holmes will be an important source of information about the strategies used by the individuals we are examining.

Conclusion

Even though he was a fictitious character, Sherlock Holmes was the embodiment of a thinking process that is both authentic and remarkable. By studying the strategies and patterns associated with this thought process we can identify and develop useful skills that have potentially important and powerful applications in 'real life.'

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Footnotes to Chapter 2

1. *A Study in Scarlet*
2. *The Five Orange Pits*
3. *A Study in Scarlet*
4. *A Case of Identity*
5. *The Boscombe Valley Mystery*
6. *A Study in Scarlet*
7. *A Study in Scarlet*
8. *The Blanched Soldier*
9. *A Scandal in Bohemia*
10. *A Study in Scarlet*
11. *The Valley of Fear*
12. *The Sign of Four*
13. *The Sign of Four*
14. *The Illustrious Client*
15. *The Sign of Four*
16. *The Adventure of the Cardboard Box*
17. *The Beryl Coronet*
18. *The Boscombe Valley Mystery*
19. *The Blanched Soldier*
20. *The Naval Treaty*
21. *The Valley of Fear*
22. *The Problem of Thor Bridge*
23. *The Hound of the Baskervilles*
24. *Silver Blaze*
25. *A Scandal in Bohemia*
26. *The Sign of Four*
27. *The Adventure of the Cardboard Box*
28. *The Boscombe Valley Mystery*