

Forensic Science in Dr. Jekyll and Mr. Hyde: Trails of Utterson's Quest

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Abstract—This paper focuses on investigating *The Strange Case of Dr Jekyll and Mr Hyde* from Utterson's point of view, referring to: Gabriel John Utterson, a central character in the book. Utterson is no different from a forensic investigator, as he tries to collect evidence on the mysterious Mr. Hyde's relationship to Dr. Jekyll. From Utterson's perspective, Jekyll is the 'victim' of a potential scandal and blackmail, and Hyde is the 'suspect' of a possible 'crime'. Utterson intends to figure out Hyde's identity, connect his motive with his actions, and gather witness accounts. During Utterson's quest, the outside materials available to him along with the social backgrounds of Hyde and Jekyll will be analyzed. The archives left from Jekyll's chamber will also play a part providing evidence. Utterson will investigate, based on what he already knows about Jekyll his whole life, and how Jekyll had acted in his eyes until he was gone, and finding out possible explanations for Jekyll's actions. The relationship between Jekyll and Hyde becomes the major question, as the social background offers clues pointing in the direction of illegitimacy and prostitution. There is still a possibility that Jekyll and Hyde were, in fact, completely different people. Utterson received a full statement and confession from Jekyll himself at the end of the story, which gives the reader the possible truth on what happened. Stevenson's Dr. Jekyll and Mr. Hyde led readers, as it did Utterson, to find the connection between Hyde and Jekyll using methods of history, culture, and science. Utterson's quest to uncover Hyde shows an example of applying the various fields to in his act to see if Hyde's inheritance was legal. All of this taken together could technically be considered forensic investigation.

Keywords—Dr. Jekyll and Mr. Hyde, forensic investigation, illegitimacy, prostitution, Robert Louis Stevenson.

I. INTRODUCTION

ACCORDING to *Analyzing Criminal Minds*, the term forensic refers to "the use of science, technology, and expert testimony in the investigation and verification of evidence presented in criminal court proceedings" [1]. In modern popular media, forensic investigation is associated with mostly determining chemical or biological reactions with research carried out in laboratories. However, forensic investigation itself is not limited to being in the lab.

Solving crime mysteries are heavily associated with deductive reasoning, and this has been prominent in detective novels, most notably Arthur Conan Doyle's Sherlock Holmes series. The art of deduction or deductive reasoning has been part of the logical tool guiding the detective to comparing the odd hints standing out from the general background. This has

inspired forensic investigators afterwards. In *The Strange case of Dr. Jekyll and Mr. Hyde*, there is also a notable amount of deductive reasoning present in the novella. Utterson, fearing that his friend Jekyll was involved with a scandalous, dangerous person, sought to discover Hyde's identity, and his quest brings forth evidence left by Hyde. His final goal was to apprehend Hyde, or at least garner a confession from his friend, which he would only be inclined to offer after and if enough evidence was revealed.

Utterson acquires major evidence to support possible theories that tells a great deal about Hyde. Some are brought to him by other people, some are presented by Hyde himself throughout the story, and there are objects which were found in Jekyll's chamber when he enters the scene. Defining Jekyll's chamber as a 'crime scene,' Utterson gains access to information that later explains that Hyde was Jekyll all along, the result the adverse effects of a self-tested serum. Forensic evidence is gained through forensic investigation, and Utterson's investigation results in providing evidence for Hyde's possible criminal actions.

This article will follow the tracks of Utterson as he gains information on Hyde. The first part will cover Utterson's perspective on his quest, the outside materials available to him, along with the social backgrounds of Hyde and Jekyll. In the second part of this article, the archives left from the crime scene play a part in concluding Utterson's quest. Utterson will perform 'profiling' based on what he had known about Jekyll his whole life, how Jekyll had acted in his eyes until he was gone, and finding out possible explanations for Jekyll's actions, under the assumption that Utterson believes the entirety of Jekyll's full statement of the case. However, as witness accounts can be unreliable, and as he had been lied to before, it is unclear whether Utterson indeed believed what Jekyll wrote in despair.

II. COLLECTING THE EVIDENCE

A. *The Motive for the 'Criminal Act': Evidence from the Outside*

1) Evidence That Hyde is an Illegitimate Son

Utterson may have suspected that Hyde was Jekyll's illegitimate son. Utterson's possible fear that Hyde may be Jekyll's son stems from the will he received from Jekyll. The will stated that if Jekyll disappeared for more than three months that Hyde should inherit all of his property and fortune without question. Having heard disturbing details of Hyde from Enfield, which was that Hyde had beaten a young girl in the middle of the night, it is only natural that Utterson was bewildered with Jekyll's decision to leave his fortune to

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someone who carried out such misdeeds without remorse. If there should be a reason to let Hyde be the successor, then Jekyll and Hyde should be very closely related, and as of the case of inheritance, it is likely Utterson considered the possibility of a father-son relationship.

Jekyll's illegitimacy and his relationship with Hyde as father and son was the first possible motive that Hyde could have had for blackmailing Jekyll. The paternal side of the illegitimate child has rarely been discussed, and as most of the rearing of the child had been done by the maternal side, this could have resulted in blackmail for money, just as Utterson would have been worried about. Jekyll, born into a prestigious family, was remembered to be "wild" when he was young by Utterson. Jekyll is shown to have no family, and is possibly unmarried. It may have therefore been possible that Jekyll had an affair with someone of a lower social status, and the difference in class may have resulted in concubinage [2]. Due to Jekyll's wealth, it would have been possible to support Hyde, since "many children born of concubinage lived in stable family groups, supported by the joint efforts of their father and mother" [2]. In 1834, there was a change in the Poor Laws which gave "an unmarried mother a right to relief on behalf of her child, whilst expecting the putative father to be financially responsible for the cost" [3]. In other words, if there should be an illegitimate child, the father was responsible for the child, as well as the mother, and the legal change was meant to relieve unmarried mothers from the economic and social burden of rearing illegitimate children alone. Even though the change itself was unpopular and saw partial revision in 1844 [3], "the general preference was to encourage both maternal and paternal responsibility" [3].

Giving birth to illegitimate children brought shame upon many women in the Victorian age, and thus, there were cases where the woman concealed the existence of the child. "Unlike murder, concealment of birth was not a capital offense and presented fewer problems with evidence" [4]. Hyde's existence was a mystery. "His family could nowhere be traced; and he had never been photographed" [5]. In Utterson's opinion, the fact that there was hardly any official information about Hyde may have given him the idea that Hyde was possibly unregistered at birth, having no establishment as a citizen. In fact, Jekyll being the benefactor indicates that it was possible to assume that Hyde was Jekyll's illegitimate son.

2) Evidence That Hyde is a Prostitute

Hyde's appearance not only provides clues about whether he may be Jekyll's son or not, but also indicates that he may be a prostitute. According to Cesare Lombroso's definition of criminal appearances around that time, Hyde's deformity and unnatural appearance may have been somewhat similar to what could have made it possible for Utterson to assume that Hyde was Jekyll's prostitute. "Anomalies of the hair, marked by characteristics of the hair of the opposite sex; defects of the thorax [...] inversion of sex characteristics in the pelvic organs", were also part of what Lombroso defined as a criminal trait [6]. However, Lombroso made his conclusion after examining male inmates, and feminine traits were also part of the criminal

appearance. This suggests low or null male productivity. Hyde's clothes were "of rich and sober fabric", suggesting possible gifts from Jekyll, as his prostitute [5].

Utterson guessed that perhaps Hyde was a male prostitute and Jekyll was possibly involved in a scandalous situation. "Publicity of homosexuality (especially of elites) generated very disruptive scandals in 19th-century England" [7]. Jekyll is a well-known 'elite' in the story, with a long list of titles indicating his high social status. He is also known to host "pleasant dinners to [...] intelligent, reputable men and all judges of good wine" [5]. and various charities. Getting involved with public prostitution would have been scandalous to Jekyll, under the assumption that he was homosexual, so it may have been possible to consider that he had hired a private prostitute. According to John Scott, the male prostitute had features that were deemed unproductive [8].

'Kept-boy' was a term that was often used in early scientific literature to indicate a young and immature homosexual prostitute. [8] The prostitute was financially supported long-term usually by an older male, and relationships became semi-permanent, "where intimate contact replaced anonymity. "[8] Due to the kept-boy usually being the passive one of the relationship, he was "signified through references to his inability to engage in 'productive' or 'real' work." [8]

Hyde was described to be younger and of small stature compared to the older and taller Jekyll, similar to "a degenerate, a perpetual child who failed to evolve into a man" [8]. Hyde was also mentioned to be dwarfish with a deformed body and "wicked-looking". The house where "Henry Jekyll's favorite" resided was "furnished with luxury and good taste" [5]. As Jekyll acts as Hyde's benefactor, it is possible that Utterson assumed that the house was a gift from Jekyll. In addition, if the private prostitution developed into a long-term relationship, then it was possible that Hyde was provided for by Jekyll. Hyde was never shown to have any other job, and in contrast to Jekyll's high social status, Hyde is of a relatively low class.

B. The Motive for the 'Criminal Act': Evidence from the Inside

1) Discovering Jekyll by the Unknown Salt

The first important thing to mention is the unknown chemical substance present at the crime scene – in other words, Jekyll's chamber. Poole, Jekyll's servant, says that he recognizes it as the drug he was always sent to collect. The exact nature of the salt is unknown, yet it is later revealed to be the essence which transforms Jekyll into Hyde and vice-versa - only that the successful salt had other substances included. Thus, without the impure salt, the salt itself was useless.

Herrad Heselhaus writes in "Turning the Screw of Immunology" that Jekyll and Hyde's relationship comes from the "immunological elements" [9]. As "Dr. Jekyll is interested in chemical investigations of the human body and of the conditions of life" and owning the house that once belonged to a surgeon tells the readers about the background of the story [9]. His study of life and biology shifted from anatomical to chemical analysis. "The new chemo-biological science of immunology deals with the hidden and the invisible" and the

chemical substance itself does not reveal anything upon first sight [9]. Utterson is not familiar with the salt and cannot glean any information about it.

It is told in Lanyon's narrative that Jekyll had requested the ingredients for the serum. Lanyon recognizes some of them, such as phosphorus and volatile ether, as he is a scientist himself. However, he does not make any comments on the "crystalline salt of white colour" [5]. What he does find is records of Jekyll's experiments.

The unknown substance which had initially been the key to the success of the initial experiment was now the reason for Jekyll's downfall. It may be that the necessary 'impure' substance was missing, but it could also mean that by the time Hyde took over his body, Jekyll was already addicted to the transformation to the point where he could not return. There is the possibility that the serum required for the transformation had initially been similar to poison and the reversal was a reaction to reduce the harm. Now that Jekyll's body had developed immunity, and therefore, there was no need to turn back.

Even as he was enticed by the promise of freedom from being Hyde, Jekyll was not satisfied with the results. Hyde's actions were scandalous, not to mention his appearance, deformed and uncomfortable to other people. However, it is not until later that Jekyll tries to solve the problem caused by the drug by "ransacking" all of London for the single salt. The salt itself, hidden within the serum and causing unknown reactions, had been the source that made Jekyll immune and therefore, unable to transform. It may be possible that the substance had never been impure in the first place, and that the transformation was impossible due to addiction.

2) Discovering Jekyll by the Letters

Letters in this novella are important when deducing the relationship between Jekyll and Hyde. One of the methods used was graphology, which is how Utterson's clerk compared the handwriting. One of Utterson's clerks was a man named Guest. Guest was a "critic of handwriting" and identified Hyde's signature as "an odd hand" which bore a "singular resemblance" to Jekyll's writing. "The two hands are in many points identical: only differently sloped", and Utterson was under the impression that Jekyll forged a fake letter for Hyde [5]. Graphology, or the analysis of handwriting, has been mentioned as a tool to identify the writer of Hyde's letter, which is possible because "each person's handwriting is so unique that it can be used to verify a document's writer. A person's handwriting is like that person's fingerprints: people might be able to copy it, but never write it in an identical way".

Modern graphology was founded in the early 17th century in the city of Bologna, and 19th century France laid the foundations for the formal study of graphology. In Britain, graphology was first introduced in the 18th century and Rosa Baugham published *Character Indicated by Handwriting* in 1871. The publication of Stevenson's *Dr. Jekyll and Mr. Hyde* was dated 1886, and it may have been possible that Stevenson was aware of graphology by that time, even though it was a relatively new field.

Graphology has been considered as a reliable method of analyzing criminal bodies since the Victorian age. Quoted from Gregory Brophy, "The emergence of new scientific and communications media provoked the Victorians to consider writing as an unconscious process of the body, akin to energy. [...] Francis Galton believed that the body itself was an archive, holding the secret traces of its bearer's history" [10]. The body being the archive is mentioned indirectly through the Jekyll's narrative when he notes that he can write in Jekyll's handwriting using Hyde's hand. "I could write my own hand" states that Jekyll's identity was still alive within Hyde, and even if his body was Hyde, his body remembered the established, unconscious movement and habits. The similar handwritings were indications that Hyde and Jekyll shared the same hands since handwriting is unique to the individual, although Utterson concluded it as forgery.

3) Discovering Jekyll by the Pious Book

There was one more piece of evidence in the room, and that was a pious book. Jekyll, a man representing the changing atmosphere of science, had been reading a religious book that he had criticized so much that it surprised Utterson. Lanyon remarks that Jekyll was "too fanciful" and "began to go wrong, wrong in mind" [5]. It is no wonder that Utterson had taken the pious book into account when investigating the final scene, when it would have been possible to simply consider it as one of the many books Jekyll possessed.

By that time there was little left that Jekyll could do to protect himself and he may have been in considerable distress, and perhaps had reached the conclusion that science could no longer save him. Perhaps he turned to religion to find inner peace, or to seek a way to compromise or accept Hyde as his new self. What is interesting is that Jekyll had already prepared to live as Hyde, which he did by leaving a will to Utterson stating that Hyde should inherit everything.

Jekyll was not able to accept Hyde as his new identity for the rest of his life. This may be due to the fact that Hyde was aggressive and violent, and was looked down on by many in society. As someone who had lived with the praise and respect of a person with a higher social status, Jekyll likely rejected Hyde as being a human being equal to himself, and therefore, decided to get rid of him once and for all. Hyde was deformed and dwarfish, had personality problems, and scared people. But he was still intelligent and was able to have a conversation with people, even if he was not the most polite person in the story. "Yes, I preferred the elderly and discontented doctor, surrounded by friends and cherishing honest hopes; and bade a resolute farewell to the liberty, the comparative youth, the light step, leaping pulses and secret pleasures, that I had enjoyed in the disguise of Hyde" [5].

Utterson remembers Jekyll as an aggressive person, and who had many faults when he was young, and according to Jekyll himself, the doctor was not entirely respectable. Having been born in a wealthy household and having many friends and contacts among society, Jekyll's future was promising and it looked like he could do nothing wrong. However, his youthful attitude continuously created conflicts, which was at odds with

how he was expected to act and what he was expected to do. He had considered his desires as 'faults' and this may have been what led to his guilt, eventually giving birth to Hyde.

Jekyll's youthful attitude, surprisingly, does not show much difference from Hyde's personality. Even as one of the leading scientists of that time, Jekyll showed conflicts with other scientists. Lanyon labelled Jekyll's work as "scientific heresies," and Jekyll called Lanyon a "hide-bound pedant for all that; an ignorant blatant pedant" [5]. Both of them, even as respected doctors, were disappointed in each other because they could not agree with each other in the field of science or in their beliefs. Lanyon and Jekyll had disagreed on their perspectives on science, with Jekyll being "too fanciful" and producing "unscientific balderdash" in Lanyon's eyes. Meanwhile Jekyll, as Hyde, had criticized Lanyon just before transforming, stating that Lanyon had "denied the virtue of transcendental medicine" [5]. Lanyon, in short, was a man of conventional science. Jekyll may have joined the progressive side and supported new ideas, but he was still an imperfect man.

III. CONCLUSION

Utterson searched for clues behind Hyde and Jekyll's relationship based on what was available and present, which include the will, the house, the check, and the evidence left behind at the murder scene. Also, during Utterson's quest, there comes the question 'Who is Henry Jekyll? Who is the criminal?' There are only Jekyll's full statement and Lanyon's narrative left for Utterson to read and conclude from. But can we say for sure that Hyde and Jekyll are indeed the same person? From all of the circumstances presented, Jekyll did create Hyde and it reflected his youthful self. But what he also did was create the criminal-self inside him.

Utterson remembers Jekyll as an aggressive person, who had many faults when he was young. Jekyll's youthful attitude had continuously created conflicts with how he was supposed to act and what he was expected to do. He had considered his desires as 'faults' and this may have led to his guilt, eventually giving birth to Hyde. It was possible to deduce the scene where Jekyll tried to create Hyde with the help of letters and testimony from other people. Although not as much as the reader may have been able to conclude the truth, Utterson was able to collect information about the transformation through the archives Jekyll left. Utterson was able to perform a forensic investigation which leads him to the case of Jekyll's experiment and his inner struggles.

Eventually, Utterson discovers the dead body of Hyde in Jekyll's house, and based on Lanyon's letter to him, he is told that Hyde was Jekyll. He also received a third disclosure from Jekyll's servant, which narrated a full statement and confession from Jekyll himself. Whether Utterson believed all of this is known, as his deductions have mostly been based on realistic problems. He was able to perform deductive reasoning based on the social circumstances that were present when the novella was published. With crimes relating to illegitimate children being high, and with the changes requiring fathers to legally support their illegitimate children and share the financial burden present in the 1830s, Utterson was able to deduce that

Hyde may be Jekyll's son. With male prostitutes having a history of being pampered with luxuries and appearing as unproductive males, Utterson could also make the deduction that Hyde might be a male prostitute. With the help of the physical evidence left at the scene of Jekyll's chambers, Utterson was able to deduce that Jekyll was a victim of Hyde, and that his despair of not being able to escape the 'evil' self, had led him to eventually resort to religion, which was not Jekyll's philosophy.

Ever since Jekyll's will was delivered and Enfield mentioned Hyde's misdeeds, Utterson tried to find out how Jekyll and Hyde were connected by evidence based on cultural and criminal acts carried out in the Victorian age, and major scientific changes that occurred during the 19th century overall. Through Utterson, the novella guided the readers on how forensic investigation can be carried out based on the evidence left at the scene, and the social background of those involved in the case.

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