

The Moriarty Gene

by Dr. Richard Kellogg

EDITOR'S NOTE: Our Feature Article for this month was authored by Professor Richard L. Kellogg.

Richard Kellogg is professor of psychology at State University of New York College of Technology in Alfred, New York.

He joined the Alfred faculty in 1970 after receiving his doctorate in educational psychology from the University of Rochester.

Kellogg is the author of two books, "Sherlock Holmes and the Origins of Psychology" and "The Little Girl and Mister Holmes," both published by Magico Publishers of New York City.

His articles on The Great Detective frequently appear in both popular and professional journals.

In addition to his Sherlockian interests (inspired by the late John Bennett Shaw), Richard Kellogg writes articles on Freud's psychodynamic theory and on the history of the Adirondack region of New York State.

Professor Kellogg often reminds college audiences that we can all do our bit in keeping Sherlock Holmes alive and well as we move into the next century.

Social scientists have argued the nature-nurture debate for many years, both in the popular press and professional literature.

The nature proponents argue that biological factors and genetic composition explain much of human behavior.

Those on the nurture side contend that environmental factors, such as family, school, church and community, are paramount in the development of behavior patterns.

It is also obvious that some traits, such as human intelligence, depend upon a complex combination of both hereditary and environmental influences.

In attempting to determine the causes of criminal behavior, it is relevant to examine the views held by Sherlock Holmes, the world's first and greatest consulting detective.

Reviewing his cases, it should be possible to deduce his position on the nature-nurture debate as regards criminality.

Holmes's stance can then be compared to contemporary perspectives on whether a person can be a "born criminal."

Certainly the most famous criminal in the Holmes saga, Professor James Moriarty is described in "The Final Problem" as the Napoleon of crime and the leader of the London underworld.

Coming from a good family and blessed with an excellent education, the evil Moriarty was destined for a life of lawlessness.

The professor showed early promise of success in academia after writing a brilliant paper on the binomial theorem.

However, he was forced to resign his position in mathematics at a small university due to persistent rumors of dire misbehavior.

During the Holmes and Watson era, many educated Victorians were convinced that personality characteristics are conveyed from one generation to the next through the blood.

The theory of the gene, the distinct unit of heredity, was not developed until early in the twentieth century.

Using the scientific vocabulary of the present day, Holmes would probably conclude that the nefarious Moriarty was endowed with a "bad gene," or set of genes, which predisposed him toward a life of crime.

Although not in Moriarty's league as a major player in the field of crime, the villainous Dr.

Grimesby Roylott and his sordid exploits are also of interest.

In "The Adventure of the Speckled Band," Roylott returns to his native England following a period of imprisonment for murdering his butler in India.

Helen Stoner, Roylott's stepdaughter, fears for her own life after her twin sister meets a horrible and puzzling death.

When Helen turns to Holmes for assistance and protection, there is a strong genetic factor in the chain of events.

She describes Roylott's ferocious outbursts of anger to the detective and notes that "violence of temper approaching mania has been hereditary in the men of the family."

This assertion by his client, readily accepted by Holmes, indicates that the wicked Dr.

Roylott was afflicted with a sex-linked trait caused by a gene located on the sex-determining pair (the 23rd pair) of chromosomes in the nucleus.

The tendency toward uncontrollable violence is apparently sex-linked because only the males of the family were affected by the trait.

To show that criminal tendencies may be exhibited quite early in human development, "The Adventure of the Copper Beeches" is quite informative.

In this investigation, Holmes evaluates the bizarre antics of a six-

year-old child in order to determine the character of the child's father.

To be more precise, the young boy is unusually cruel and finds it entertaining to crush cockroaches with his slipper.

This sadistic form of amusement leads Holmes to believe that the child inherited a violent disposition from his father, Jephro Rucastle.

In describing his cognitive processes to Dr. Watson, Holmes says, "I have frequently gained my first real insight into the character of parents by studying their children."

This statement is a clear reference to the concept of atavism, the exhibition by an individual of ancestral characteristics.

In "The Naval Treaty," we find that Holmes was an admirer of French criminologist, Alphonse Bertillon (1853-1914).

Bertillon developed a system, which consists of a series of bodily measurements, to aid in the identification of criminals.

Experts in crime theorized that dangerous criminals were evolutionary throwbacks who resembled prehistoric man.

Bertillon and his followers related criminal predisposition to such features as large skulls, receding chins, long arms, and big ears.

His method of classification was gradually replaced after 1900 by the new science of fingerprinting.

The preceding illustrations make it evident that Sherlock Holmes, in

agreement with such contemporaries as Charles Darwin and Francis Galton, favored the nature side of the nature-nurture controversy.

Perusal of the Holmes literature suggests that the great detective often stresses the heritability of criminality, intelligence, and emotional temperament.

Perhaps the most fascinating aspect of the nature-nurture debate on criminality is that it still continues at the present time.

The best example of this can be found in a provocative book titled "Crime and Human Nature" (Simon and Schuster, 1985), which was written by two Harvard professors, James Wilson and Richard Herrnstein.

The authors, in much the same way as Holmes, contend that some individuals are born with constitutional factors which predispose them to certain types of crime.

While there may not be a single "crime gene" in the human body, there are inherited traits which increase the probability of engaging in criminal behavior.

For example, Wilson and Herrnstein report that muscular young males (perhaps those exposed to high levels of sex-related hormones before birth) are much more aggressive and prone to violence than young women.

In addition, they find that criminals are significantly less intelligent, on the basis of IQ scores, than the average person.

Low intelligence does not automatically create a criminal but it seems that many criminals have below-average intelligence.

As for the factor of temperament, the authors feel that impulsiveness, a short attention span, and the inability to delay gratification are traits present from birth which predispose some individuals toward reckless and illegal activities.

Many of the conclusions reached by Wilson and Herrnstein rely heavily upon statistical studies of criminality involving identical twins,

adopted children, and family relationships.

It is rather amazing that modern researchers in the field of criminology, such as Wilson and Herrnstein, are following the same trails which intrigued Sherlock Holmes more than a century ago.

To discover the underlying causes of crime and to develop new techniques for preventing it remain among the major challenges of our time.

Although we should not ignore poverty, racism, joblessness, and other environmental factors which

relate to crime, biological and genetic factors may prove to be powerful predictors of criminal behavior.

It is hoped that genetic tendencies toward crime, if they do prove to exist, can be modified by early intervention with such methods as psychotherapy, classes in effective parenting, and improved preschool education.

Additional research on both genetic and environmental factors is necessary if we are to prevent the emergence of criminals like James Moriarty and Grimesby Roylott in future generations.