

# Can Sensation Seeking Explain a Vocational Interest in Forensic Identification?

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## Abstract

*The purpose of this article is to describe the occupational demands and duties of a forensic identifier. It is illustrated that the occupational demands and duties of a forensic identifier are stimulating, novel, and challenging. It is proposed that an interest in this career may be related to the personality factor of sensation seeking. Lastly, a review of occupations with similar stimulating, novel, and challenging occupational demands and duties are reviewed.*

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### Forensic Identification

Many occupations provide interesting and stimulating activities, tasks, duties, and demands. One such occupation is forensic identification. Forensic identification has stimulating, novel, challenging, and nonrisky occupational demands as part of the daily work routine.

The occupational demands of forensic identifiers are constantly changing with high external stimulation (Yura, 1999). Forensic identification is a scientific occupation focused on documenting, collecting, analyzing criminal evidence (Baldwin, 2002; DeLucia & Doyle, 1998; ICSIA, 2002). It is a scientifically based occupation that applies scientific techniques and technology (Baldwin, 2002; DeLucia & Doyle, 1998; ICSIA, 2002). Forensic identifiers objectively apply scientific techniques and technology to determine the facts in a criminal investigation. The information obtained is organized, verified, and then presented to the judicial system for determining innocence or guilt of a suspect in a criminal case (DeLucia & Doyle, 1998; Yura, 1999).

Forensic identification is an occupation considered nonconventional, stimulating, and demanding high responsibility. Its occupational demands are constantly changing with high external stimulation (Yura, 1999). Forensic identifiers must be able to handle novel, complex, and unpredictable situations (e.g., crime scenes with dead bodies or other physical evidence).

The duties and occupational demands of a forensic identifier are intricate (Rowh, 2000). Although their duties vary from agency to agency, responsibilities generally include the following (ICSIA, 2002). Forensic identifiers generally work a 40-hour week and have to respond at a moments notice, often working irregular hours (Dillon, 1999). First, the scene needs securing (e.g., using barricades, tape, or rope). Then, forensic identifiers process the crime scene. Processing includes the collection, identification, documentation, preservation, and securing of physical evidence. Evidence that is collected must be documented. Various forms of documentation may take place – dusting for fingerprinting, casting, photography, measurements, sketching, diagrams, and written report of collected physical evidence (e.g., blood, hair and fiber samples, clothing, shell casings, and trace evidence). Once evidence has been collected, it must be properly secured and packaged. As such, knowledge of proper methods for handling, transporting and storing evidence is essential.

Forensic identifiers also determine the events leading up to the crime. During the process of collecting evidence, the forensic identifier must attempt to reconstruct events and develop a theory related to the crime. This may include explaining the effects of time and environmental surroundings, describing and interpreting the evidence

found at the scene, understanding autopsy reports, utilizing information obtained from interrogations, and laboratory reports. The forensic identifier must record what was found at the crime scene and convey the findings in detailed reports. These reports assist other officials in preparing criminal cases. Additionally, forensic identifiers may be requested to give expert testimony in criminal court cases. This requires them to be knowledgeable of courtroom procedures, understand rules of evidence, and have knowledge of federal and state statutes.

Although a majority of time is spent in the “field,” at the scene, and in court, forensic identifiers also perform tasks in the laboratory. They must be proficient with the maintenance and usage of high technology equipment (e.g., microscopes, chromatographs, spectrographs, and computers) used to assess physical evidence. Additionally, they may work closely with forensic pathologists in determining the exact nature of an individual’s death.

As discussed, forensic identifiers’ occupational demands are complex and intricate. Learning these skills requires specialized educational training emphasizing scientific methods (Dillon, 1999; Furton, Hsu, & Cole, 1999; Stinchcomb, 1996). In addition to educational training in an academic setting, significant training involves hands on experience or fieldwork (Gaensslen & Lee, 1988). These field experiences are generally provided through cooperation between various forensic science laboratories (Lee & Gaensslen, 1988).

Employment in many forensic organizations requires extensive education and training in the scientific fields, such as chemistry and biology (Siegal, 1988). Additionally, coursework in psychology, mathematics, and statistics and training in the usage of complex instruments for analyzing evidence is

required. Lastly, forensic identifiers must have good oral and written communication skills to prepare the written reports and provide expert testimony to the judicial system.

Overall, the occupational demands of a forensic identifier are numerous, and intricate. In order to handle their occupational demands, identifiers need innovative thinking and analytical skills to deal effectively with ambiguity or uncertainty, to interact productively with other professionals, and to handle highly stressful environments and situations (graphic, grotesque stimuli). A forensic identifier's preference for new experiences, high external stimulation, and dislike for routine, conventional work, and repetitive experiences can be potentially related to personality characteristics.

Personality traits are a way in which we can characterize and describe an individual. Preferences and interests, including certain behaviors, attitudes, and expressions, are the basis for defining personality traits (Cloninger, 1996). Past research has found relations between personality traits (e.g., extraversion-introversion, sociability, impulsiveness, and sensation seeking) and interest in certain occupations (Costa, McCrae, & Holland, 1984; Hogan & Blake, 1999; Holland, 1985; Holland, Johnston, & Asama, 1994). For instance, individuals with certain preferences are interested in occupations that are nonconventional, stimulating, and novel (Zuckerman, 1994).

Assessment of personality traits and their relation with occupational interests, especially with more contemporary, nontraditional occupations such as forensic identification, is necessary (Lowman, 1991; Osipow, 1987).

Certain personality traits may be advantageous or adaptive for the occupational demands. For instance, research supports that certain occupations provide the necessary stimulation for sensation seekers (Best & Kilpatrick, 1977; Biersner & LaRocco, 1983; Kish & Donnenwerth, 1969; Oleszkiewicz, 1982; Waters, Ambler, & Waters, 1976; Zaleski, 1984). Findings indicate that high levels of sensation seeking are positively related to career interest patterns associated with challenging and novel situations, unstruc-

tured tasks, and flexibility in their approach, such as forensic identification. Forensic Identification is an occupation with demands that are novel, challenging, and nonrisky. Personality traits, such as sensation seeking, may explain the interest in the profession.

### **Sensation Seeking Characteristics**

Sensation seeking is "a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman, 1994, p.27). Sensation seeking traits can be measured via standard self-report questionnaires (e.g., SSS-V). These traits can be partitioned into four dimensions: thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility (Zuckerman et al., 1978). Currently, the explanation for sensation seeking is genetic, biological, psychophysiological, and social factors (Zuckerman, 1983b, 1984, 1990, 1994, 1996; Zuckerman, Buchsbaum, & Murphy, 1980) that influence certain behaviors, attitudes, and preferences.

Sensation seeking individuals engage in behaviors to increase the amount of stimulation they experience. Such behaviors (e.g. interest in stimulating occupations, drug use, driving recklessly, etc.) involve seeking arousal. Satisfying a preference for stimulation can be accomplished through many behaviors, activities, and attitudes (Arnett, 1991; Irwin & Millstein, 1986; Zuckerman, 1985, 1994; Zuckerman & Neeb, 1980). These include recreation, lifestyle choices, sports, social interactions, and occupational choice. These stimulating activities vary in the amount of risk associated. Although risk taking is a correlate of sensation seeking it is not the primary motive in behavior (Zuckerman, 1994). Sensation seekers accept risk as a possible outcome of obtaining arousal, yet do not seek out risk for its own sake (Zuckerman, 1994).

### **Other Stimulating Occupations**

A stimulating job can be an ideal source of arousal for high sensation seekers. Various studies have found cer-

tain career interests and choices to be associated with sensation-seeking characteristics (Best & Kilpatrick, 1977; Biersner & LaRocco, 1983; Kish & Donnenwerth, 1969; Oleszkiewicz, 1982; Waters et al., 1976; Zaleski, 1984). Additionally, more adventurous and non-conventional occupational choices are ideally suited for individuals with sensation seeking preferences (Biersner & LaRocco, 1983; Kish & Donnenwerth, 1969; Oleszkiewicz, 1982; Zaleski, 1984). For example, Kish and Donnenwerth (1969) found that certain occupations on the Strong Vocational Interest Blank (SVIB) correlated with scores on a sensation seeking scale. High sensation seeking scores positively correlated to vocational interest patterns associated with novel situations, stimulating surroundings, unstructured tasks, and flexibility in their approach as major components of their occupational demands. Males with high sensation seeking scores tended to choose scientific or social service careers (e.g., psychologist, psychiatrist, and social worker). In contrast, low sensation scores were related to structured, well-defined tasks with order and routine in the occupation. Traditional vocations (e.g., housewife and home economics teacher) were inversely related to sensation seeking scores for females and directly related to such occupations as attorney.

Investigation of the types of personality traits of individuals already in a chosen occupation has been completed. Zaleski (1984) found that sensation seeking scores were related to certain chosen professions. Occupations including firefighters, mountain rescue and mine rescue squads tended to have higher thrill and adventure seeking scores when compared to sportsmen professions (e.g., race car drivers, mountain climbers, and parachutists). The sportsmen group also had elevated thrill and adventure seeking scores on the SSS-V. Furthermore, both groups had elevated scores on the disinhibition scale when compared to a matched control group.

Various individuals are attracted to vocations with a higher degree of risk. A U.S. Navy diver is one such occupation. In a study investigating U.S. Navy divers, Biersner & LaRocco (1983)

found that the divers had an internal locus of control, socialized less with others outside of their profession, and have less reports of chronic anxiety than normative male groups. The sensation seeking scores for this sample revealed a preference for thrill and adventure seeking through risk associated with danger. They also displayed a low level of disinhibition and experience seeking indicating minimal preference for mental or social activities that are novel or unconventional (e.g., living in a nonconforming life style with unconventional friends, drinking, partying, and seeking variety in sexual partners). Results from this study suggest that individuals in this occupation prefer stimulation that is more external with a moderate degree of risk.

Although some occupations are risky, many are non-risky yet stimulating. In a study by Waters et al. (1976), it was found that pre-flight students in the U.S. Navy indicated high external sensation seeking and thrill and adventure seeking preferences, yet have low disinhibiting and experience seeking behaviors. Therefore, these students could find adequate, non-risky stimulation in their occupational choices.

A similar finding was discovered with crisis rape counselors. Best and Kilpatrick (1977) compared the personality profiles of 14 female pediatric nurses and 20 female counselors who worked with rape victims. The counselors in this study had a variety of occupational demands. These counselors worked in the field in crowded emergency rooms with high levels of sensory stimulation (e.g., multiple individuals, chaotic surroundings, exposure to individuals with trauma). Using objective personality tests and inventories (e.g., MMPI and SSS-V), counselors indicated more openmindedness and flexible attitudes towards patients. Differences in sensation seeking traits revealed that these counselors had significantly higher scores on the disinhibition scale and experience seeking scale of the SSS-V than the pediatric nurses. These results also support that these counselors enjoy stimulating work environments, are non-anxious, and prefer disinhibiting behaviors.

Finally, in a study of vocational preference, Oleszkiewicz (1982) deter-

mined that occupations providing new sensations and experiences (e.g., journalist, movie double, sportsman, and surgeon) attracted individuals with elevated scores of general sensation seeking, thrill and adventure seeking and boredom susceptibility (SSS-V). Out of a list of 44 different occupations, high school seniors were asked to pick the three most and three least desired occupations. Individuals choosing vocations that involved some level of risk (e.g., aircraft pilot, policeman, and army officer) had elevated levels of thrill and adventure seeking behaviors. In summary, these results indicate that sensation seekers, based on their varying preference for stimulation, have interest or chose certain careers.

### Conclusion

Overall these results indicate that sensation seekers, based on their varying preference for stimulation, have interest or chose certain careers. Forensic identification provides a socially acceptable outlet for sensation seekers without running the risk of participation in personal, social, or legally harmful behaviors. The occupational demands of forensic identification provide a non-risky source of stimulation.

Forensic Identifiers' occupational conditions are non-risky in the physical sense, yet demanding in various activities. These demands range from remaining current on new collection and analysis equipment, following rigid standard protocol, exposure to graphic crime scenes, exposure to chaotic situations, dealing with heightened levels of ambiguity in the "field," gathering evidence in a timely fashion, preservation of crime scenes, and uncovering evidence that can lead to potential court decisions. Occupational characteristics similar to those found in forensic identification provide a socially and legally acceptable way for these individuals to increase arousal (Zuckerman, 1979a, 1994). These occupational characteristics may be a vehicle for which high sensation seekers can obtain an optimal level of arousal (Zuckerman, 1979a) in a non-risky manner.

Interest in forensic identification may be related to high sensation seeking preferences, attitudes, and behaviors. So far it is unknown what sensa-

tion seeking preferences are associated with interest in forensic identification. Based on the occupational demands it is relevant to determine the type of individual interested in forensic identification. Furthermore, certain characteristics of sensation seeking may be related to decreased stress reactions to stressful situations. Therefore, future studies that investigate the potential relationship between sensation seeking and interest in forensic identification are warranted.

### References

- Arnett, J. (1991). Still crazy after all these years: Reckless behavior among young adults aged 23-27. *Personality and Individual Differences, 12*, 1305-1313.
- Baldwin, H. B. (January 25, 2002). *Crime scene investigator*. [Online]. Retrieved on January 25, 2002. <http://www.feinc.net/csi-desc.htm>
- Best, C. L., & Kilpatrick, D. G. (1977). Psychological profiles of rape crisis counselors. *Psychological Reports, 40*, 1127-1134.
- Biersner, R. J., & LaRocco, J. M. (1983). Personality characteristics of US Navy divers. *Journal of Occupational Psychology, 56*, 329-334.
- Cloninger, S. C. (1996). *Theories of personality: Understanding persons* (2nd ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.
- Costa, P. T., McCrae, R. R., & Holland, J. L. (1984). Personality and vocational interests in an adult sample. *Journal of Applied Psychology, 69*, 390-400.
- DeLucia, R. C. & Doyle, T. J. (1998). *Career planning in criminal justice*. 3rd. ed. Cincinnati, OH: Anderson Publishing Co.
- Dillon, H. (1999). Forensic scientists: A career in the crime lab. *Occupational Outlook Quarterly, 28*, 2-7.
- Furton, K. G., Hsu, Y. L. & Cole, M. D. (1999). What educational background do crime laboratory directors require from applicants? *Journal of Forensic Sciences, 44*, 128-132.
- Gaensslen, R. E., & Lee H. C. (1988).

- Regional cooperation and regional centers among forensic science programs in the United States. *Journal of Forensic Sciences*, 33, 1069-1070.
- Hogan, R., & Blake, R. (1999). John Holland's vocational typology and personality theory. *Journal of Vocational Behavior*, 55, 41-56.
- Holland, J. L. (1985). *Making vocational choices: A theory of vocational choices and work environments*. (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Holland, J. L., Johnston, J. A., & Asama, N. F. (1994). More evidence for the relationship between Holland's personality types and personality variables. *Journal of Career Assessment*, 2, 331-340.
- Kish, G. B., & Donnenwerth, G. V. (1969). Interests and stimulus seeking. *Journal of Counseling Psychology*, 16, 551-556.
- International Crime Scene Investigator's Association (January 28, 2002). *ICSIA's CSI FAQ File*. [On-line]. Retrieved on January 28, 2002. <http://www.icsia.com/faq.html>
- Irwin, C. E., & Millstein, S. G. (1986). Biopsychosocial correlates of risk-taking behaviors during adolescence. *Journal of Adolescent Health Care*, 7, 82-96.
- Lee H. C., & Gaensslen R. E. (1988). Forensic science laboratory/forensic science program cooperation and relationships: The view from the forensic science laboratory. *Journal of Forensic Sciences*, 33, 1071-1073.
- Lowman, R. L. (1991). *The clinical practice of career assessment: Interest, abilities, and personality*. Washington, DC: American Psychological Association.
- Oleszkiewicz, Z. Z. (1982). Demand for stimulation and vocational preferences. *Polish Psychological Bulletin*, 13, 185-195.
- Osipow, S. H. (1987). Counseling psychology: Theory, research, and practice in career counseling. *Annual Review of Psychology*, 38, 257-278.
- Rowh, M. (2000). Hot jobs in the crime lab. *Career World*, 28, 29-32.
- Siegal, J. A. (1988). The appropriate educational background for entry level forensic scientists: A survey of practitioners. *Journal of Forensic Sciences*, 33, 1065-1068.
- Stinchcomb, J. D. (1996). *Opportunities in law enforcement and criminal justice careers*. Rev. ed. Lincolnwood, IL: VGM Career Horizons.
- Waters, C. W., Ambler, R., & Waters, L. K. (1976). Novelty and sensation seeking in two academic training settings. *Educational and Psychological Measurement*, 36, 453-457.
- Yura, M. T. (1999). West Virginia University Forensic Identification Program Undergraduate Information. (Available from the Department of Forensic Identification, West Virginia University, PO Box 6121, Morgantown, WV 26506-6121).
- Zaleski, Z. (1984). Sensation seeking and risk taking behaviour. *Personality and Individual Differences*, 5, 607-608.
- Zuckerman, M. (1979a). *Sensation seeking: Beyond the optimal level of arousal*. Hillsdale, NJ: Erlbaum.
- Zuckerman, M. (1983b). Sensation seeking: A biosocial dimension of personality. In A. Gale and J. Edwards (Eds.) *Physiological correlates of human behavior: Vol. 3 Individual differences* (pp. 99-115). New York: Academic Press.
- Zuckerman, M. (1984). Sensation seeking: A comparative approach to a human trait. *Behavioral and Brain Sciences*, 7, 413-471.
- Zuckerman, M. (1985). Sensation seeking, mania, and monoamines. *Neuropsychobiology*, 13, 121-128.
- Zuckerman, M. (1990). The psychophysiology of sensation seeking. *Journal of Personality*, 58, 313-341.
- Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. New York: Cambridge Press.
- Zuckerman, M. (1996). The psychobiological model for impulsive unsocialized sensation seeking: A comparative approach. *Neuropsychobiology*, 34, 125-129.
- Zuckerman, M., Buchsbaum, M. S., & Murphy, D. L. (1980). Sensation seeking and its biological correlates. *Psychological Bulletin*, 88, 187-214.
- Zuckerman, M., Eysenck, S., & Eysenck, H. J. (1978). Sensation seeking in England and America: Cross-cultural, age, and sex comparisons. *Journal of Consulting and Clinical Psychology*, 46, 139-149.
- Zuckerman, M., & Neeb, M. (1980). Demographic influences in sensation seeking and expressions of sensation seeking in religion, smoking and driving habits. *Personality and Individual Differences*, 1, 197-206.