

Free-Response Question 1

Discuss how social and biological factors have an impact on each of the following in the individual.

- A. *Body weight*
- B. *Perception*
- C. *Alcoholism*
- E. *Extraversion*
- F. *Schizophrenia*

Question 1 Scoring Guide

The intent of Question 1 is to explore how social and biological factors contribute to the cause/perpetuation/maintenance of body weight, perception, alcoholism, extraversion, and schizophrenia. The question does not ask for the consequences (e.g., Korsakoff's disease as a consequence of alcoholism) on the individual.

Social factors may be thought of as:

- a. environmental
- b. external to the individual

The impact of the social factor is often seen as a response to an external stimulus.

Biological factors may be thought of as intraorganismic.

In many cases, one should ask if the given answer indicates **how** the factor has an impact. Answering **how** (discussing) often follows identification of the **agent** (factor) at work.

Points are awarded if a key issue is postulated even in the presence of an inaccuracy. No points are awarded in the event of a direct contradiction.

Points are not awarded when the agent is a psychological factor rather than social or biological. (See handout for examples of what not to score.)

For biological factors of body weight, alcoholism, and schizophrenia, to say that something "runs in the family" or "is genetic" or "has a family history" is not scored if it is expressed alone or as an absolute. The issue of probability must be mentioned in some manner (e.g., predisposition, tendency, vulnerability, increased chance, susceptibility, higher probability, more likely, etc.). Any example of evidence attesting to the above, while desirable, is not necessary.

The essays will be graded as designed; one point for the social and one point for the biological impact on body weight, perception, alcohol, and schizophrenia.

Concerns regarding the spelling of extraversion warranted the awarding of both the social and biological points for this area.

Body Weight

It is not enough to state that the influence of media has a social impact without explaining **how** media (as a social factor) has an impact on the individual.

Scored examples:

- Social
 - 1. social norms induce dieting (to adhere to norms)
 - 2. external *social* cues affect consumption (Schachter)
 - 3. situational eating (family eating patterns, holidays)
 - 4. learned food cues for food intake
 - 5. career demands on physique (e.g., ballet dancers)
- Biological
 - 1. predisposition (vulnerability, susceptibility, tendency, etc.)
 - 2. neural regulation of hunger/satiety/consumption
 - set points
 - hypothalamus
 - glucostats (rarely)
 - hormonal factors (e.g., glycogen, glucose, insulin)
 - 3. metabolic rate affects calorie use/consumption/burn
 - exercise increases rate
 - thyroid abnormalities
 - 4. adoptees' weight correlated with biological families more than with adopted families
 - 5. concordance ratios > for monozygotic twins than for dizygotic twins or siblings
 - 6. disease processes (e.g., "wasting" can affect body weight)
 - 7. drugs (e.g., amphetamine) are a biological agent

Perception

Social factors in perception are those **immediately** available to the individual as he or she encounters the stimulus, but they do not include subsequent analysis or interpretation of the event. These latter processes are social cognitions and not social perceptions.

- Social
 - 1. perceptual set effects on immediate perception
 - 2. social expectations (prejudice, stereotypes)
 - 3. cultural norms
 - 4. social/environmental effects on perceptual mechanisms
 - horizontal stripes shown to kittens to change their visual receptive fields
 - group influences on autokinetic effect
- Biological
 - 1. sensory alterations affect perception
 - sensory deficits (e.g., color blindness, occipital damage)
 - heightened receptor sensitivity
 - 2. Gestalt principles describing innate properties
 - 3. developmental processes (maturational)
 - 4. drug-induced perceptions (hallucinogens)
 - 5. psychiatrically derived perceptions (hearing voices)

Alcoholism

- Social**
1. observational learning (e.g., parental use)
 2. cultural norms
 3. social norms/expectations (e.g., **peer pressure**)
 4. therapy/self-help changes in alcohol use patterns
 5. social factors contributing to or exacerbating abuse
 - stress
 - isolation

- Biological**
1. predisposition (vulnerability, susceptibility, tendency, etc.)
 2. ethnic or sex differences in metabolism of alcohol
 3. inherited cognitive differences (e.g., P3 waves)
 4. link between affective disorders and alcoholism
 5. adoption or twin study data

Extraversion Two points automatically scored

Schizophrenia

Social Factors do not cause, but may trigger a schizophrenic episode.

- Social**
1. stress **triggers** (not causes) a predisposed condition
 2. social factors (e.g., social disapproval) promote relapse
 3. social factors can **exacerbate** or reduce symptoms (e.g., therapy)
- Biological**
1. predisposition (vulnerability, susceptibility, tendency, etc.)
 2. brain factors correlated with schizophrenia
 - neurotransmitters (e.g., dopamine)
 - ventricle size
 - Type 1 (positive) and Type 2 (negative) symptoms respond differently to drug therapies
 - chemical imbalances in the brain
 3. drug therapies relieve symptoms
 4. adoption and twin studies show genetic influence

Sample Student Responses

EXCELLENT ESSAY (10 points)

The ~~argument~~ ~~debate~~ debate over the relative roles of nature and nurture is almost as old as the scientific discipline of psychology itself. Some scientists argue that genetic factors ~~have~~ ^{are} have the largest influence over an individual, while others believe that social influences are paramount. Regardless, most psychologists ~~believe~~ ^{agree} that some of each contributes to the overall individual. Factors such as body weight, perception, alcoholism, extraversion, and schizophrenia are all partially affected by both biological and social factors.

Body weight is often closely linked to physiology. Some individuals have a quicker metabolism and ~~of~~ burn fat more quickly; others ~~so~~ simply produce fat cells rapidly. Still, a person's surroundings influence body weight as well. Someone living in impoverished conditions will have a low body weight regardless of genetics. A child whose friends go out to eat frequently will probably also learn to eat more, contributing to greater body weight. Alcoholism works in a similar way. Studies have shown that a predisposition for alcohol is inherited. Some people can consume five

drinks without any ill effects while others become drunk after just one. Socially, some people frequent circles where drinking is common, and thus so is alcoholism. Others may have been brought up to avoid alcohol except in rare situations.

Perception, too, is affected by biology and environment. Babies already possess the neural hardware to perceive depth, as the "visual cliff" experiment shows. But cats raised in an environment with only vertical lines became unable to see horizontal objects when released from this unusual environment, showing that the environment significantly affects perception. Extroversion is very dependent on society. A child encouraged to socialize by parents and friends will be more social. Still, some children are biologically more inclined to be friendly, as PET scans reveal.

The diathesis-stress model is widely used to understand schizophrenia. If one identical twin is schizophrenic, the other has a 50% chance of also developing the disease. This is clear evidence of genetic predisposition. However, 50% of the time the twin remains normal. A social or environmental stress must be present to trigger the disease.

Clearly, many widely varied factors are affected both by natural biological factors and by social influences. More research will bring the nature-nurture debate one way or the other, but the two will always share the responsibility for shaping each and every individual.

Social and Biological factors influence ~~the~~ nearly all parts of life. Body weight, for instance, can be affected by both factors. Stress and depression may cause a person to eat more, increasing body weight, and a desire to be accepted by peers and to live up to the socially ideal body type could cause a person who is over weight to eat less, decreasing body weight. Biological factors influence body weight in that children inherit genes from their parents which determine metabolism. The specific functioning of the hypothalamus in determining ~~the~~ ~~a~~ a person's set point may also differ from person to person. A person's perception of a situation is also affected by social factors such as peer pressure, stereotypes, prejudice, and situations involving groupthink & Group Polarization. Because of external influences, a person may understand the meaning of an event differently. Biological factors may include things as simple as varying quantities of eyesight, hearing, and other senses. ^{rather} A person ~~may~~ to understand the situation in a certain way. Alcoholism may be socially influenced, as stress may ~~can~~ drive a person to drink. Peer-pressure, and social situations also may increase the

amount a person drinks. While social factors may lead to Alcoholism, a person's biology determines the extent to which a person may become addicted. A child born to alcoholic parents is more likely to become alcoholic than a child born to non-alcoholic parents, as studies show alcoholism is hereditary. Extraversion, or the tendency to be outgoing and assertive, can be influenced by social factors such as when a person becomes caught up in the activities of a group and experiences deindividuation. The individual may act in ~~the~~ extraverted ways atypical of that person. Being in social situations may also increase a person's self-confidence, when that person is surrounded by people who are familiar and accepting. A person's tendency to be extraverted may also be hereditary, or controlled by neurochemicals which may inhibit or support shyness. Finally Schizophrenia, while mainly biological and caused by "overabundance of" dopamine, may be brought to the surface by social factors. If a person has difficult life situations and is not accepted by peers, it is possible that what may have been mild Schizophrenia surfaces as something more intense. The onset of Schizophrenia, however, cannot be explained by any other means than by the biological explanation of too much dopamine.

GOOD ESSAY (7 points)

Social and biological factors have ~~many~~ impacts on individuals' body weight, perception, alcoholism, extraversion, and schizophrenia. The social and biological factors are not always the cause of problems but they do together make up and contribute to the items listed above.

First of all, there is body weight. Body weight is often determined socially by the eating habits of the culture the individual lives in. The kind of foods, amount eaten, and the times of day when foods are eaten greatly contribute to the individual's body weight. The body image, or what society thinks is ~~the~~^{an} attractive body, also ~~affects~~ affects body weight. Women in America, for example, diet and exercise constantly to achieve the "ideal" look. Biological factors affect body weight because often obesity is ~~hereditary~~ genetic and is inherited. Bone structure and composition also contribute to body weight. There are also chemical imbalances within the brain which cause people to eat too much or to eat very little.

Perception is not affected in any biological way. Social factors are ~~the~~ the main contributor to how a person views and interprets things. Society often places stereotypes on people and things.

that the individual ~~just~~ follows to conform with society. Often times what ~~the~~ parents and family think on certain topics is the same interpretation the child adopts.

Alcoholism on the other hand is ~~the~~ impacted by both biological and social factors.

Alcoholism definitely is an inherited disease. Often children of alcoholics become alcoholics themselves. Social factors, like peer pressure and beer commercials are the reasons why some many people drink.

Extraversion is also impacted both socially and biologically. The way your family brings you up to be outgoing or shy has an impact but so does innate ~~aspects~~ aspects of personality.

Finally schizophrenia is only biologically impacted. It is caused by imbalances in chemicals in the brain. To conclude there are many aspects of life that are impacted by both biological and social factors. Together all the factors and aspects make up an individual. The combination of all the factors and aspects are all different in many ways. That is why all human beings are different, because of their experiences and ~~the~~ their inborn characteristics.