

Theory, operationalization, and observation

Science, Statistics



Theory, Operationalization, and Observation Theory, Operationalization, and Observation Theory infers a systematic explanation for observations that relate to a certain aspect of life, and which scientists derive testable hypotheses. Concepts denote the basic building blocks of theory (Babbie, 2010). For instance, social scientists may have a theory concerning the causes of juvenile delinquency. The researcher may adopt the hypothesis that delinquency is inversely related to social class whereby as social class goes up, delinquency reduces.

Operationalization encompasses developing operational definitions, or stipulating the precise operations involved in identifying and measuring variables needed to be observed. Scientists have to oversee their operation definitions so as to guarantee the efficacy of their observation, measurement, and communication. In order to test any hypothesis, scientists must specify the meanings of all the variables involved in the hypothesis. For instance, in the stated example, the variables encompass social class and delinquency.

Variables refer to operationalized versions of concepts. In order to operationalize the variables, delinquency may be defined as “ an event of being arrested by law enforcement for a crime,” while social class may be conceived in terms of family status or income levels. After the variables definition, the next step entails specifying the mode to be utilized in measuring the variables (Somekh & Lewin, 2005). In the example, the variables may be operationalized in the form of questions such as “ have you ever stolen anything?” The respondents who say yes will be categorized as delinquents, while the respondents who answer no will be categorized as non

delinquent.

Social class can be operationalized by posing the question “ what was your family’s income last year?” The answer is measured against a set of provided family income categories. The operationalized hypothesis from the stated example can be expressed as the highest incidences of delinquents manifest among respondents bearing the lowest family income category.

Observation denotes looking at the world and making measurements based on the observations. Observation details specifying the precise operations involved in measuring variables and incorporate aspects such as seeing, hearing, and touching. Observations can be conducted to test a certain hypothesis or plainly observe and describe some activity.

Wright, B., Caspi, A., Miech, R. & Silva, P. (1999). Reconsidering the relationship between Social Economic Status (SES) and delinquency: Causation but not correlation. *Criminology* 37 (1): 175-194.

The researchers first employed the theories explaining the dominant role that socioeconomic status play in sociological explanations of delinquency. In operationalizing the theory, the researchers posed the question: does low socioeconomic status result to high levels of deviance, as stipulated by the theory, or are the two weakly correlated or non-correlated, as per empirical findings?

Their approach was shaped by three propositions, namely: 1) the impact of socioeconomic status on deviance is fundamentally indirect, operating via various causal mediators; 2) through classical criminology theories low socioeconomic status yields a high degree of delinquency, and 3) through some mediators as stipulated by power control theory and social-

psychological theories, high socioeconomic status results to high levels of delinquency (Wright, Caspi, Miech & Silva, 1999).

The SES of the members' families was measured with a six-point scale, which assessed the parent's occupational status. The scale ranged from 1 (unskilled labourer) to 6 (professional). In addition, the researchers utilized two additional measures of social class, namely: parental education and family income. Delinquency was measured with private, self-reported delinquency interview, grounded on a standardized instrument developed by the researchers. After observation and analysis of the findings, the researchers concluded a lack of correlations between SES and delinquency.

References

Babbie, E. (2010). *The practice of social research*. Belmont, CA: Wadsworth.

Somekh, B. & Lewin, C. (2005). *Research methods in the Social Sciences*. London, UK: Sage.

Wright, B., Caspi, A., Miech, R. & Silva, P. (1999). Reconsidering the relationship between Social Economic Status (SES) and delinquency: Causation but not correlation. *Criminology* 37 (1): 175-194.