

# Genetic Essentialism<sup>1</sup>

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*Genetic essentialism* is arguably one of the most important social phenomena today, and yet scholars have given it only limited attention. This said, genetic essentialism can be understood to be a variant of a more general phenomenon that has received thorough investigation by scholars—psychological essentialism. Below, I define psychological essentialism and explain how a minor modification yields genetic essentialism. I also discuss the relationship between genetic essentialism and the related concept of *genetic determinism*. Finally, I briefly discuss some of the effects of genetic essentialism and determinism on attitudes and behaviors.

The concept of genetic essentialism can be understood to be a specific type of psychological essentialism. Psychological essentialism has several well-accepted components. Probably the most critical component is reflected in its name: people believe that categories possess “essences.” An essence is some sort of underlying entity thought to be shared by all category members. This entity—which may be concrete (as in genes) or spiritual (as in a soul)—represents the category’s “true nature” and is believed to be causally responsible for category members’ observed similarities. (See especially work by developmental psychologist Susan Gelman.) For example, the element *gold*, the species *tiger* (*panthera tigris*), the religious group

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*Catholics*, the regional group *Europeans*, and even a professional group such as *accountants* are believed by many people to share deep properties (essences) that are responsible for creating observable characteristics shared by members of the category. Before proceeding further, it is important to clarify that, while such essentialist perceptions are common and may even be an intrinsic part of human psychology, psychological essentialism is an aspect of human *perception* of the world and should not be confused with empirical reality. This is why the term is *psychological* essentialism, as opposed to simply “essentialism.”

Studies have demonstrated that a belief in some type of essence that determines other characteristics perceived to be shared by category members is theoretically and empirically associated with several other beliefs. Individuals who believe that an essentialist basis underlies group members’ similarities also tend to: (1) view category membership as absolute (as opposed to graded); (2) exaggerate the extent to which individual category members share observable characteristics (i.e., stereotype); (3) see group-linked characteristics as mutually exclusive (if present in one group, then not present in any other group); and (4) understand these similarities to be stable over time and unalterable, most likely because the essence itself is considered unalterable. These four types of belief are often folded into the definition of psychological essentialism.

It is important to note that not all types of categories are equally likely to be essentialized. In particular, scholars draw distinctions between “natural kind” and “human artifact” categories. A natural kind is a category of objects discovered in nature that would exist even in a world with no humans; examples from the previous list include gold and tigers. Human artifacts are constructed by people, often to serve a particular function, such as clocks or books. Given that the belief in an internal force driving category members’ similarities is fundamental to

psychological essentialism, it should be of no surprise that people are more likely to essentialize natural kinds than human artifacts. Human artifacts are clearly the product of external forces (human invention), whereas causal influences on natural kinds are more likely to be internal. What is more surprising is that people also tend to essentialize social categories—such as Catholics, Europeans, and accountants—as if they were natural kinds, when in reality they are more similar to human artifacts (because their boundaries and shared characteristics are largely socially constructed). In short, social groups are perceived by many to be similar to biological species. (See especially work by Myron Rothbart and Marjorie Taylor.)

This said, essences are not always perceived to be biological. Douglas Medin and Andrew Ortony have proposed that, in the human mind, categories possess “essence placeholders.” People fill these placeholders with a variety of idiosyncratic beliefs that range in their specificity and plausibility. Examples of what constitutes essences include souls or spirits, blood or brain structures, and hormones or genes. *Thus, the definition of “genetic essentialism” seems straightforward: it is the belief that genes make up the (mostly) unobservable essence that determines category membership.* Genes are perceived to be the substance that creates sharply defined groups with shared, mutually exclusive, and immutable characteristics. In sum, genetic essentialism is a type of psychological essentialism, one where genes have filled the essence placeholder. Calling genetic essentialism a variant of the broader concept of psychological essentialism should not diminish its importance. Numerous scholars have argued that, at least in the contemporary era, genetic metaphors—e.g., “it is in their DNA”—are one of the most common ways in which essentialist beliefs are expressed.

All essences are assumed to be deterministic, i.e., to serve as the independent and unstoppable creators of a group’s shared, observable characteristics. Genes fill the role of

essence so well because they are also assumed by most people to be deterministic. At the extreme, *genetic determinism* is the belief that a person's genome provides a blueprint that defines a person's every characteristic. DNA is said to be causally responsible for an individual's unique identity. Applied to social groups, genetic determinism points to genes as directly responsible for shared group characteristics, ranging from distinctive cultural norms to income differences. Genetic determinism need not always be so all-encompassing, however. While it is true that genetic influences tend to be interpreted in deterministic ways (e.g., a person learning s/he has a gene that increases the risk of Alzheimer's by 10% may erroneously believe s/he is certain to develop the disease), most people do not believe that *every* individual or group characteristic is driven by genes. Most believe that additional causal forces, including socialization and choice, also influence some human characteristics and behaviors. Thus, while genetic essentialism *requires* genetic determinism as its causal engine, genetic determinism need not always lead to essentialism. It is possible to believe genes determine a handful of traits possessed by a person or group without reducing their entire identity to their genes.

It should be emphasized that genetic essentialism and determinism bear little relationship to genetic science. For example: almost no human characteristics or diseases are determined by single genes; genes interact in extraordinarily complex ways with a variety of phenomena (internal and external to the person) during the course of human development; and the genetic diversity *within* social groups is far greater than any genetic differences found *between* social groups. Lay belief in the deterministic character of genes and in the existence of significant biological differences between social groups probably stems from psychological essentialism. Susan Gelman has observed this process among children. She finds that children often use biological language when describing human differences. In doing so, they do not appear to begin

with biological facts, e.g., what they learned in school, and draw essentialist conclusions; rather, they begin with essentialist beliefs and search for a cause, such as biology. Gelman argues that this human tendency to assimilate biology to essentialism results in a folk biology that is essentialist. This said, to some extent the relationship between psychological essentialism and lay beliefs about genetics is endogenous, with causation running in both directions. This is because it is *also* true that exposure to scientific arguments about the role of genes in human behavior encourages people to think in essentialist ways. For example, those who learn that a subset of individuals shares a genetic commonality, however small, are more likely to perceive large and permanent differences between that group and others.

The social and political effects of genetic essentialism and determinism vary. Depending on the person, target, and social context, believing that group or individual differences are rooted in genetic differences can be associated with conservative *or* liberal policy ideas and high *or* low levels of stigma. The conditions under which genetic explanations may lead predominantly to one type of effect or another are admittedly not very well understood.

Genetic determinism can decrease stigma when a negative characteristic has previously been viewed as a moral failing, such as homosexuality, obesity, drug use, or criminality; however, such determinism can also increase stigma to the extent that a person or group's disliked characteristics are believed to be permanent. Genetic determinism also brings with it deep—and usually unwarranted—pessimism about the possibility for change. At the individual level, this can decrease motivation to pursue healthy behaviors as a means of improving physical or psychological health. At the social level, this can lead to reluctance to engage in helping behavior toward those in need. From a political perspective, genetic determinism misrepresents

downward the odds of success of governmental efforts to address social problems, including socioeconomic inequality.

Because genetic essentialism exaggerates group differences and renders them permanent in the imagination, it often results in inter-group prejudice and discriminatory behaviors. In fact, according to some scholars, genetic essentialism is synonymous with prejudice. Genetic essentialism has been used by numerous dominant social groups to justify their societal position and associated discriminatory policies. The most notorious example is the German Nazi Party's use of genetic theories of racial difference to justify the Holocaust. Prior to World War II, many whites in the U.S. based their support for racial segregation and African Americans' disenfranchisement on a belief in the genetic superiority of whites. This said, note that there are also some instances of members of disadvantaged groups—including African Americans, lesbians and gay men, and women—embracing genetic essentialism as a means of strengthening group solidarity and, in a few cases, even asserting their innate superiority over others.

Despite these varied and sometimes unpredictable social and political associations, scholars tend to argue that genetic essentialism and determinism are normatively problematic on balance. There is little question that such phenomena usually exacerbate social divides and lower expectations for change. In some cases, they have contributed to truly catastrophic events. Finally, genetic essentialism and determinism are epistemically problematic in nearly all instances: they represent flawed theories of the empirical world masquerading as scientific ones.

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