



**AGGRESSION THEORIES REVISITED: LORENZ'S
NEOINSTINCTIVISM, WILSON'S SOCIO-BIOLOGY AND SKINNER'S
BEHAVIORAL THEORIES**



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ABSTRACT

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This article aims to revisit neo-instinctivism, socio-biological and behavioral theories account of human aggression. Humans apparently have a long history of violence. It is customary in many social psychology textbooks contain chapters on aggression. One of the explanations about the subject usually has a section on the “instinct theory of aggression” that usually associated to the ethologist Konrad Lorenz who aims to examine aggression with a class of biological explanations. Aggressive energy is an instinctual drive that enhance until it explodes. It may be released by external stimuli. Socio-biological perspective contributes a more complicated interactionist model for contemplating the origins of human aggression. Wilson’s ideas combine ethological studies with other biological factors to explain human aggression and war as a consequence of the interaction between the cultural environment and genes. In order to understand human aggression, there are the dichotomies between biology and environment, nature and nurture, or instincts and learning. It is interesting to point out that the radical behaviorists Skinner is as much an evolutionist as Konrad Lorenz both of whom believe the nature of the mechanisms designed by natural selection. The objective of this study is to describe different definitions and causes of aggression in humans. It is important to present different explanations of aggression ranging from neo-instinctivism, socio-biological, and behavioral analysis. In the first part of the paper, after the definition of aggression, it entails a close look to Lorenz’s neo-instinctivism approach. The second part focuses on Wilson’s sociobiological idea of the aggression. The third section emphasizes Skinner’s behaviorism. The conclusion gives a summary of all perspectives.

Contribution/ Originality: This study contributes in the existing literature about aggression on neo-instinctivism, socio-biology and behavioral theories. It is one of the few studies which combine and investigate two main theories (neo-instinctivism and socio-biology) about aggression. It revisits Lorenz’s neo-instinctivism and Wilson’s socio-biological ideas about human aggression.

1. INTRODUCTION

Conflict, war, destruction, and violence are assumed to be manifested by aggression. The increase in war, conflict and violence (intra-state and inter-state) has turned the attention of many scholars, notably, child development and early-childhood education practitioners to the theoretical inquiry into the nature and causes of aggression. But what is aggression? What are the causes of human aggression? Does it originate from nurture or nature? In other words, is it a nature of behavior, an instinct that is inherited, or is it the intention behind the behavior?

In fact, aggression, which is one of the aspects of the human nature, is a multifaceted phenomenon that has many determinants. Kaj Bjorkqvist defines aggression as "an act, not an inner state," and claims that "the emotion of anger is often (but not always) a precursor of aggression [1]. Arnold Buss defines aggression as "a response that delivers noxious stimuli to another organism." Shaffer [2]; Dollard, et al. [3] who are of a behaviorist orientation try to decline inner states logic and contemplate a more goal-directed approach [3]. They define aggression as an "act that is intended to injure the person or persons toward whom it is directed." Worchel, et al. [4] There are in fact, several schools of thoughts that describe the causes of aggression from different points of views. Neo-instinct theorists who hold a biologically deterministic view, explain aggression from within and declare that aggression is an universal innate drive that is inherited by our ancestors. Sociobiologists also communicate a biologically deterministic view. Psychoanalysts are distinguished from in their approach to aggression, but especially Freud can also be thought of as one of the well-known defenders of the Instinct theory. Then, there are advocates of the frustration-aggression hypothesis, who derived their theory from Freud's theories of displacement and externalization, but added an environmental character in it, and finally the behaviorists and the social learning theorists, who allocate a greater emphasis on the external stimuli, or environmental causes of aggression and propose that it is a learned behavior.

Neo-instinct theorists have a biologically determined view of aggression and account it from within, on the other hand, behaviorists and social learning theorists elaborate it from without. Although distinctly different, these paradigms also have commonalities. In my opinion, through the synthesis of these three perspectives that has ruled the twentieth century in psychology, the definition of aggression can transform from a singular mode toward more multidisciplinary construction and can give us a clearer picture in understanding the deep-rooted and underlying causes. However, one should not take this synthesis as an overarching framework, but use the valuable observations gained from each perspective as an application of child development and early childhood education.

This paper aims to examine the causes of aggression by exploring into two perspectives: Neo-instinctivism (including the sociobiological debate) and Behaviorism, and endeavor to investigate the differences and similarities between and within these perspectives in search for answer to the main question "what are the causes of the human aggression?"

In the first part of the paper, after the definition of aggression above, it will bring about a close look to neo-instinctivism and compare and contrast the sociobiological ideas within the paradigm. The second part will focus on Radical Behaviorism and neo-Behaviorism (Skinner), and will explain the Skinnerian approach. The last section will entail a comparative summary of all two perspectives.

2. LORENZ AND NEO-INSTINCTIVISM

Although seeking for solutions in human behaviors to get explanations for the animal behaviors seems irrelevant at first, some behavioral psychologists thought that the identification of basic similarities and complex differences that are introduced by the ethologists can be helpful to avoid oversimplified, single factor explanations of human behaviors. In recent decades, one of the most quickly advancing branches of biological sciences has been ethology, the study of animal behavior in all its aspects, "with particular emphasis on the four basic animal drives of reproduction, hunger, fear, and aggression" [5]. Ethology is "the scientific study of the species specific and genetically mediated behavioral patterns of animals and [individuals]. In dealing with behavioral homologies and

phylogenies, ethologists have come to recognize the need for observing behavioral patterns, within the specific environment in which different behaviors have evolved” [6]. Konrad Lorenz can be identified as the father of ethology and he has studied more than 40 species of animals to understand the biological roots of aggression. As a result, in spite of the fact that he was coming from a totally different framework, Lorenz also proposed the existence of an innate, aggressive drive in humans. However, his definition of aggression is something very different from the destructive principle Freud defined of *Thanatos* which was also defined as an instinct [7]. Lorenz, like Freud, asserts that aggression is not necessarily the result of a reaction to outer impetus, but an explosion of accumulated energy that occurs even without a need to an external stimulus. In other words, aggression is a result of an instinct sustained by an ever-flowing energy that accumulates continuously without any source of dissipation. In his own words, “aggression is primarily not a reaction to outside stimuli, but a built-in inner excitation that seeks for release....regardless of how outer stimulus is” [8]. Lorenz claimed animals and humans don’t wait passively until the proper stimulus appears to release the dammed-up energy of the drive, but usually find it somehow to release it. They search for, and even produce stimuli. Lorenz called this behavior “appetitive behavior” [9]. This hypothesis of Lorenz, such as Freud’s, depends on the hydraulic (reservoir) model. However, according to Lorenz aggression is “differ from the destructive principle defined by the Freudian hypothesis of *Thanatos*,” Wolman [10] and that aggression is not necessarily bad. This is Lorenz’s second hypothesis on aggression. Lorenz suggests that aggression is an instinct that ensures the survival of the species (species-preserving function) by spacing them instead of bunching them together in an overpopulated habitat (this is similar to Darwinian view of survival of the fittest). Through this function, species can protect their territory, protect and possess the female, and have a preservative function establishing rank order [11]. According to Lorenz, the typical aggressive instinct occurs among the members of the same species as opposed to members of different species, i.e. it is intra-specific rather than inter-specific. He based his claim on the fact that “a fish, mammal, or bird will defend its territory against others of its own species,” [12] and not against others from different species. In his work, *On Aggression* (1960) Lorenz discussed various ways in which aggression is adaptive to those animals that engage in it. He claimed that aggression is widely distributed among the animals, and there are certainly lots of evidences that are pointing out that it has a substantial heritable component. He also asserted that aggression is also influenced by the social context in which it is derived from, i.e., as a dynamic instinct that is situational. In terms of human behavior and particularly human social behavior, Lorenz states that “Human behavior, and particularly human social behavior, far from being determined by reason and cultural tradition alone, is still subject to all the laws prevailing in all phylogenetically adapted instinctive behavior.” [13]. He also recognizes that individual’s social instincts and his/her social inhibitions, “could not keep pace with the rapid development of traditional culture, particularly material culture” [13]. Referring the inventions of weapons utilized in modern warfare, Lorenz mentioned the ills of civilization and indicated that the “aggressive behavior and killing inhibitions represent only one special case among many in which phylogenetically adapted behavior mechanisms are thrown out of balance by the rapid change wrought in human ecology and sociology by cultural development” [13]. Here, although his views on modernity were different than of Freud’s, it was also similar to the ideas in *Civilization and Its Discontents*. However, Lorenz also asserted that:

The man [individual] who behaves socially from natural inclination normally makes few demands on the controlling mechanism of his [her] own moral responsibility...in order to curb his [her] natural inclination into a semblance of normal social behavior, is very likely to break down in case of additional stress” [13].

By this implication, Lorenz, such as Freud, suggest that the “moral strength [of the individuals] in order to control” the instinctual urge (or in Freudian terms, suppression) may result in nervous disorders (Freudian hysteria, anxiety, etc.) and frustrations that may eventually lead to aggression. Lorenz also differentiated from Freud in terms of his acceptance of a subtle relationship between innate behavior and learning in the environment. Both Freud and Lorenz agree that the failure to express aggression in action is unhealthy. As Lorenz introduced the term of almost

ceremonial, "ritualized fighting" in ducks, and other animals, he also recommends that all human sports also has the components of this act [14]. He recommends that humans can find an unthreatening outlet for this innate drive by preventing built in aggression, by watching an aggressive sports event. This can be also purveyed by creating debate teams, political parties, and other types of competitive events including international sports contests, to keep people healthy by the cathartic discharge of aggression. In that sense, Lorenz almost views the dissemination of aggression as a basic human need, and instead of viewed negatively, if it is viewed in terms of using this energy for positive transformation, it can also be viewed as a driving force to produce social change (in Freudian terms, this would be sublimation). On the parallel note, one of the most interesting parts of Lorenz's ideology for psychology and child development is the bond which forms between animals (greylag geese in particular) as a reaction to threats from without against the group. "Discriminative aggression towards strangers and the bond between the members of a group enhance each other" [8]. By this definition, Lorenz is almost defining the ethnocentrism in humans that creates invisible boundaries between them eventually leading to aggression [15]. Similarly, this framework is also parallel with Volkan's concept "need for enemy" [16-18]. Consequently, this is supported by his phenomenon of "militant enthusiasm...[which is]...a specialized form of communal aggression, clearly distinct from yet functionally related to the more primitive forms of petty individual aggression...[there] can not be a slightest doubt that human militant enthusiasm evolved out of a communal defense response of our pre-human ancestors" [13]. In that sense, Lorenz is implying the enthusiasm shared by the group in defense against a common enemy, again almost laying the foundation for the emphasis of in-group similarities and out-group differences phenomena that play a major role in explanation of aggression that enhances it, while being enhanced by it. Moreover, his concept of intra-specific aggression can also be compared to severe atrocities that take place during the civil wars. In short, although Lorenz was criticized by analysts who viewed nurture more important than nature as a determinant of behavior, with an open mind, one can appreciate his contributions to a unified theory of human behavior, which is by no means is a set model, but a working framework that is being fed by paradigm shifts as the world progresses.

3. WILSON AND SOCIOBIOLOGY

While nurture/nature discussion carried on among the scholarly communities, Edward O. Wilson came up with his book *Sociobiology: The New Synthesis* in 1975. Similar to Lorenz's ideas, this book contributed a rigid biological basis for the understanding of intractable human social behaviors with which social scientists ineffectually attempted to struggle for a long time. However, Wilson was an entomologist by profession who almost always concentrated on insect studies (especially ants). In his endeavor to elaborate human behaviors based on insects, Wilson received a lot of criticism from other social scientists, such as Fromm who is a firm proponent of nurture over nature, but also found support among others, such as Richard Dawkins who is the author of the book called *The Selfish Gene* [19, 20]. He, as Freud and Lorenz, was biologically deterministic and highlighted the power of genes over environment. Wilson claimed the improbability of aggression as an instinct in birds and mammals, and indicated out that the key to aggression was in the environment.

"It seems to me that we are dealing with a genetically inherited array of possibilities some of which are shared with other animals, some not, which are then expressed to different degrees depending on environment" [21].

Wilson also recommends that "the tendency under certain conditions to indulge in warfare against competing groups may well be in our genes, having been advantageous to our Neolithic ancestors" [21]. This inborn gene description, has opened the lid of the can of worms towards egalitarian ideologies and the idea of race, according to some scholars like Ashley Montagu, that "led directly to the Holocaust"[22] and other genocidal events involving persecution of homosexuals, and mental patients as well as ethnic cleansing, as it was often applied within the former Soviet system in Russia and other authoritarian regimes.

Wilson expressed that “the sociobiologists are interested in more general features of human nature [rather than culture/nurture angle] and the limitations that exist in the environmentally induced variations” [23]. He claimed that those who rejected sociobiology were reductionists and claimed that biology was the key to human nature [24]. However, as it was noted by Van Der Berghe [25] it can be interpreted that sociobiology is not a firm genetic determinism or a simplistic instinct theory:

“[it] is not the antithesis of the culturally deterministic position,...[since] the sociobiologists are quite happy to recognize that the human species is unique in some important aspects, [but]...humans are not unique in being unique...nor the sociobiologists deny the importance of human consciousness and culture and the effect these have in greatly accelerating processes of human adaptation to and modification of the environment”[26].

There are undoubtedly some divisions among the sociobiologists, and as psychoanalysts they too contrast in their more right-wing or liberal approach to geneticism and its role on human behavior including aggression. In fact, Wilson’s conceptions about sociobiology have commenced interest among some other scholars of many disciplines that is comparable to that developed by Skinner’s *Beyond Freedom and Dignity*.

4. BEHAVIORISM AND B.F. SKINNER

One of the radical behaviorists, B.F. Skinner, investigates the human behavior in terms of finding the right reinforcements (positive/negative and reward/punishment) in order to create a desired behavior. Radical behaviorism examines the roots of behavior in terms of operant conditioning. Following the Pavlovian response-stimuli (cause-effect) hypothesis, Skinner focuses on the importance of environmental and social conditioning on human behavior and emphasizes a term of operant behavior (conditioning) of the individuals [27]. Skinner is generally considered to stress environmental explanations of behavior over genetic ones, but in his book about Behaviorism, he outlines the innate behavior as the starting point for the conditioning process. According to the principles of operant conditioning, an organism tends to increase the frequency of responses that prove to be rewarding, however, before a response can be reinforced it must be first produced. In that sense, one can view psychology has to study “what reinforcements tend to shape human behavior and how to apply the reinforcements most effectively. [Thus] Skinner’s ‘psychology’ is the science of engineering of behavior; its aim is to find the right reinforcements in order to produce a desired behavior” [8]. Skinner emphasizes the power of reward, rather than the punishment and declares that through the proper use of positive reinforcement, the behavior of animals (based on experimentation with animals, such as the Skinner box) and humans can be altered to an amazing degree, even in opposition to what Freud and Lorenz would call “innate tendencies.” In that sense, although behaviorism at the individual level seems to be compatible with sociobiology at the species level, since it also supports the view of the impact of the environment (or social culture) by his implication of behavior is determined by reinforcement. However, this explanation is limited. For example, Fromm is skeptical about Skinner’s ideas in terms of so-called positive reinforcement in terms of individuals who were conditioned to be persecutors and torturers. Fromm claims, in spite of their positive reinforcement, these individuals still get mentally sick. He asks:

Why does positive reinforcement not prevent many [individuals] from rebelling, out of the strength of their reason, their conscience, or their love, when all conditioning works in the opposite direction? And why are many of the most adapted people, who should be star witnesses to the success of conditioning, often deeply unhappy and disturbed or suffer from neurosis?” [8].

Fromm also points out that an individual can be conditioned to be a slave, but he/she will “react with aggression or decline in vitality”; or he/she can be conditioned to feel “like part of a machine and react with boredom, aggression, and unhappiness” [8]. With all these implications, obviously Fromm is pointing to the direction of free will, which Skinner seems to neglect while emphasizing the operant conditioning. Skinner has been criticized by other humanistic psychologists “who say that his ideas directly or indirectly encourage treating persons as objects to

be manipulated” [28]. Although Fromm strongly opposes the radical behaviorism of Skinner, they still seem to have a common point since both of them are accepting the contribution of individual environmental surroundings and histories as the main determinants of the presently existing human behavior.

One can investigate Skinner’s behaviorism from two different angles. First, one can discuss that although Skinner’s rationalism ignores individual’s passion, and the concept of free will, it also gives hope for the development of a peaceful and just society for the thinkers who claim that such society can be designed by positive reinforcement of some sort including economic prosperity. Second, his thoughts can lead to assimilation and other forced adjustments (compulsory heterosexuality) by “positive” reinforcement of individuals who seem to appear deviant and different in terms of society’s imposed rules, regulations, and norms. This is based on Skinner’s belief that “opportunities for alternative, adaptive behaviors...can be shaped and maintained through positive reinforcement, the extinction of undesirable behaviors, and better control of the contingencies of reinforcement operating in individual’s life” [28]. At the same time, operant conditioning with negative reinforcement can be used as an apologetic excuse for the explanation of aggression as well as the acts of the murderers, and other criminals who commit genocidal acts. This is a dilemma in Skinner’s behaviorism and also a single-factor approach. It is similar to the “aggression is only in the genes” hypothesis, by saying “no, aggression is only in the conditioning.” However, from his point of view, neo-instinctivism, socio-biological theories and behaviorism can be viewed to have one common point: that individuals have no psyche structure and no free will, no responsibility about their own lives, and they are either a product of conditioning, or the product of evolution through gene transformation. In any case, they are exclusively determined by conditions outside themselves. In Skinner’s approach, no specific stages are assumed as it was in psychoanalysis (Freud, Erikson, Klein, all accepted these stages). Skinner considered humans as “behavior emitters,” and stressed environmental causes for maladaptive behavior. He suggested that “an innate component may be involved in certain types of aggressive responses (for example hitting, or biting when physically attacked) as a result of the possible contribution of these responses to the survival of the species during evolutionary history” [28]. In this approach, his theory resembles of the Lorenz who similarly claimed that aggression was a result of an innate behavior for the survival of the species. Moreover, by his implication, Skinner gives some kind of a leeway to flexibility (bad or good, based on subjective interpretations) of the human nature, which is similar to Freud’s theory which suggests that “aggressive impulses can sometimes be redirected into socially constructive activities [such as in sublimation], and that certain inhibitions against aggression (such as moral values) can be developed during the socialization process” [28]. Freud and Skinner also parallel each other in terms of both of their concentration on individual cases that restricts the generalization of their inductive findings. In Skinner’s case, these individual cases included animals in experimental situations (Skinner’s box), and in Freud’s case, they were his patients such as Hans the Rat Man, Dora, Anna O., and others. Although Freud was opposed by not paying attention to the environmental causes, in my opinion, his explanation of superego development during childhood which is heavily impacted by paternal constructions point out that, he gave social environment that surrounds the individual to some attention. Similarly, Skinner also conceptualized the importance of the environment in his own way, and in this sense, both are different from ethologist Lorenz and other sociobiologists who were pretty deterministic in their view of genetic inheritance. While “Skinner’s basic data were “quantitative” that explained animal and human nature from without, Freud’s basic data “was qualitative” that explained it from within.

5. CONCLUSION

There are discussions among psychoanalysts, sociobiologists and behaviorists that aggression has adaptation. The debate among different perspectives concern whether adaptive trend in aggression is nature (innate, primary) or nurture (acquired, secondary). The subject of human aggression has brought the attraction and interest of evolutionary biologists and neo-instinctivists. Because of influence from the Social Darwinism, some scholars believe that “might

is right” doctrine with biological justifications of human aggression. They claim that aggression has key evolutionary importance to humans.

One of the criticisms for sociobiologists’ explanations about aggression is that if certain behaviors such as aggression are genetically determined, it means we cannot do anything about them. Male aggression is usually connected to the increase of male reproductive success to fight off rivals. If aggression is determined by nature, it makes human beings helpless to unable to do anything about it. Critics of deterministic explanation of aggression claim that human being is special because of its intelligence and culture. They assert that historical and cultural factors may have effects on community differences about aggression. Likewise, inequalities and hierarchies in human societies as well as many male and female differences may have role on human aggression. In addition, sociobiologists may dismiss the importance of learning that plays a role on acquiring social behaviors such as aggression. The generalization from animal to human behavior may forget taking into account the human use of a complex language system. Sex and gender identities influenced by genetic, biological, social and cultural factors may play roles on human aggression.

This study underlines some commonalities and differences between socio-biology, human ethology, neo-instinctivism, and behaviorism. The emphasis on innateness and genetic relatedness of aggression may be one of the recurrent themes. The statement “conflict occurs because humans are inherently aggressive” may be doubtful and should not be interpreted as humans are completely aggressive by nature. The simplified explanation about human nature is generalization. We should not forget that environmental factors may also play an important role in the development of aggression in human beings.

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REFERENCES

- [1] K. Björkqvist, *The inevitability of conflict but not of violence: Theoretical considerations on conflict and aggression*, Douglas P. Fry and Kaj Björkqvist (Eds.), *Cultural variation in conflict resolution: Alternatives to violence*. New York: Psychology Press, 2009.
- [2] D. R. Shaffer, *Social and personality development*, 6th ed. Wadsworth: Cengage Learning, 2009.
- [3] J. D. Dollard, W. Leonard, N. E. Miller, O. H. Mowrer, and R. R. Sears, *Frustration and aggression*. New Haven: The Institute of Human Relations by Yale University Press, 1939.
- [4] S. Worchel, J. Cooper, and G. R. Goethals, *Understanding social psychology*, 4th ed. Chicago, Illinois: The Dorsey Press, 1988.
- [5] A. Rapoport, *The origins of violence: Approaches to the study of conflict*, 2nd ed. New Jersey: New Brunswick, 1997.
- [6] K. Peter and N. Petryszak, *Sociobiology versus biosociology*, Ashley Montagu (Ed). *Sociobiology Examined*. New York: Oxford University Press, 1980.
- [7] A. J. Bond, L. H. Malcolm, and C. D. S. C. Jose, *Aggression: Individual differences, Alcohol, and benzodiazepines*. UK: Psychology Press, 1997.
- [8] E. Fromm, *The anatomy of human destructiveness*. New York: Holt, Rinehart, and Winston, 1973.
- [9] A. Spink, *Information behavior: An evolutionary instinct*. London: Springer, 2010.
- [10] B. B. Wolman, *Contemporary theories and system in psychology*, 2nd ed. New York: Plenum Press, 1981.
- [11] G. Cashman, *What causes war? An introduction to theories of international conflict*. Lanham: Rowman & Littlefield, 2014.
- [12] J. E. Dougherty and R. L. J. Pfaltzgraff, *Contending theories of international relations*, 4th ed. New York: Harper Collins Publishers, 1997.
- [13] K. Lorenz, *On aggression*. London: Routledge. Translated by Marjorie Kerr Wilson, 2002.

- [14] D. Zilmann, *Connections between sexuality and aggression*, 2nd ed. Mahwah, NJ: Lawrence Elbraum Publishers, 1998.
- [15] A. D. Ogretir and S. Ozcelik, "The study of ethnocentrism, stereotype and prejudice: Psycho-analytical and psychodynamic theories," *Journal of Qafqaz University*, vol. 24, pp. 236-244, 2008. [View at Google Scholar](#)
- [16] V. Volkan, *The psychodynamics of international relationships* vol. I & II. Massachusetts/Toronto: Lexington Books, 1990.
- [17] V. Volkan, *Blood lines: From ethnic pride to ethnic terrorism*. Colorado: Westview Press, 1997.
- [18] S. Ozcelik, "Border creation in cyprus: Contested history and the psychodynamic perspective of Vamik Volkan," *Peace and Conflict Review*, vol. 7, pp. 1-11, 2013. [View at Google Scholar](#)
- [19] D. P. Barash, *Sociobiology and behavior*. New York: Elsevier, 1982.
- [20] E. Wilson, *Consilience: The unity of knowledge*. New York: Knopf, Inc, 1999.
- [21] E. O. Wilson, "Sociobiology: A new Approach to understanding the basis of human nature," *New Scientist*, May 13, 1976.
- [22] A. Montagu, *Sociobiology examined*. New York: Oxford University Press, 1980.
- [23] E. O. Wilson, *Introduction: What is sociobiology? in Michael S. Gregory's (et.al), Sociobiology and Human Nature - An Interdisciplinary Critique and Defense*. San Francisco: Jossey - Bass, Inc., Publishers, 1978.
- [24] E. Wilson, *On human nature*. London: Harvard University Press, 1978.
- [25] P. L. Van Der Berghe, *The ethnic phenomenon*. Wesport: Praeger, 1981.
- [26] P. L. Van Den Berghe, *Bridging the paradigms: Biology and social science. In T.C. Wiegale (Ed.), Biology and the social sciences: An emerging revolution*, 13-28 ed. Colorado: Westview Press, 1982.
- [27] R. B. Ewen, *An introduction to theories of personality*, 6th ed. New York: Psychology Press, 2003.
- [28] R. D. Nye, *Three psychologies: Perspectives from freud, skinner, and Rogers*. New York: Brooks/Cole Publishing Company, 1998.

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