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Moral Development: The Interaction Between Nature and Nurture

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ABSTRACT

This literature review examines whether moral development is primarily determined by innate tendencies, environmental influences, or their interaction. The ongoing debate of nature vs. nurture makes it difficult to determine whether one's moral sense is mainly influenced by genetics or the environment. Two major studies are compared and discussed in this research to provide insight into moral development. The first paper is a systematic review that synthesizes 26 studies across three developmental approaches: natural moral sense, social relationships, and environmental factors. The second paper is an experiment conducted to replicate and extend previous findings that "infants prefer individuals who act prosocially toward unrelated third parties over those who act antisocially" (Hamlin & Wynn, 2011). Together, the findings from the two studies suggest that moral development begins with early prosocial preferences that are refined through social and environmental interactions. Moral development can apply to family interactions, anti-bullying programs in school, and social media usage. Moral development is also relevant to psychology concepts including heredity, schemas, social learning theory, prosocial behavior, and signature strengths and virtues.

INTRODUCTION

Psychologists have long debated whether morality is biologically innate or developed through social and environmental experience. Kohlberg's theory of moral development describes moral development as different consecutive stages. The theory explains that individuals progress through six stages of moral reasoning, grouped into three levels: preconventional, conventional, and postconventional. The preconventional level is during childhood, where decisions are based primarily on self-interest and the avoidance of punishment. The conventional level is during adolescence and adulthood, where social expectations, relationships, laws, and social order guide decisions. The postconventional level is a stage of advanced moral reasoning in which decisions are guided by higher ethical principles and individual rights that go beyond societal laws (Kohlberg, 1981).

While Kohlberg's model suggests that morality is a cognitive construct built over time, Moral Foundations Theory (MFT), proposed by Jonathan Haidt, offers a different perspective. MFT posits morality as a diverse set of intuitive, biologically based foundations that vary across cultures (Haidt & Joseph, 2004). The six core foundations include Care/Harm, Fairness/Cheating, Loyalty/Betrayal, Authority/Subversion, Sanctity/Degradation, and Liberty/Oppression, serving as evolutionary building

blocks for social behavior. The tension between these two contrasting theories creates a critical debate: are humans born with a moral compass aligned with the nature side, or do they build morality through social and environmental experiences aligned with the nurture side?

SIGNIFICANCE

Morality is one of the primary aspects people evaluate when forming impressions of another person. Morality is central to liking, respecting, and understanding other people, and it shapes society's distinction between "prosocial" and "antisocial" behaviors (Mickelberg et al., 2022). In an evolutionary sense, moral traits are signals that indicate whether a person should approach or avoid a potential social partner based on the perceived altruism or selfishness of that partner (Krueger, 2016). Since morality affects human relationships, decision-making, and behavior throughout life, psychologists and researchers have long studied how moral beliefs are developed. By understanding how possible innate predispositions interact with social experiences, parents, educators, and society can better understand how to shape moral development as humans progress through different stages of life.

METHODOLOGY AND SELECTION CRITERIA

To examine how nature and nurture interact in moral development, two studies were selected for their complementary perspectives: Limone and Toto's (2022) systematic review offers a broad overview of how moral development may be shaped by both internal and environmental factors, while Hamlin and Wynn's (2011) experiment provides empirical evidence specifically on infants' early social preferences. These studies were evaluated by comparing their participant age groups, research designs, and theoretical claims. Together, the two studies provide a useful basis for discussing the topic of moral development.

STUDY 1: *ORIGIN AND DEVELOPMENT OF MORAL SENSE: A SYSTEMATIC REVIEW, PIERPAOLO LIMONE AND GIUSI ANTONIA TOTO*

Research Methods

To be eligible for inclusion in this systematic review, studies needed to meet several criteria. First is the reporting language: all studies necessary for this review had to be reported in English, and studies reported in languages other than English were excluded regardless of their usefulness. Second is the type of study: studies that present information contributing to socio-moral development. Third is the outcome measures: studies that reported positive moral development as an outcome measure were considered eligible (Limone & Toto, 2022).

The search strategy utilized is an Ovid search. Databases including Crossref, Google Scholar, and PubMed were relevant for finding studies that accurately measure the topic this research paper aims to address (Limone & Toto, 2022).

To determine which articles to include, two reviewers independently and critically assessed the eligible studies to reach consensus. When disagreements arose between the two reviewers, a third reviewer would intervene to help reach consensus. The researchers used the Cochrane risk-of-bias tool to assess the validity of the selected articles. Only studies with a low risk of bias were included (Limone & Toto, 2022).

A total of 602 studies were retrieved electronically from the search databases, and the researchers chose 26 studies for the systematic review.

Results

The systematic review suggests that while some aspects of moral reasoning may emerge early in life, indicating possible innate predispositions, social interactions and exposure to environmental factors also play an important role in the development of morality (Limone & Toto, 2022).

These results were derived from three approaches. The natural moral sense approach holds that children could be born with a moral sense. One study by Carpendale and Hammond observed that children consistently help their parents with daily activities. Young children possess a natural moral sense when deciding what behaviors are considered prosocial and what is antisocial. Prosocial for young children means helping parents, and antisocial means staying idle. Another study by Smetana and Ball had young children aged between four and nine years old tested to determine their response to physical harm, resource transgressions, and psychological harm to their enemies and friends. It found that children considered moral transgression improper, which supports the existence of early prosocial behavior preferences. A follow-up study was conducted a year later to ascertain whether age is a determining factor in children's development of moral judgments regarding different types of harm. The study found that young children made weak moral judgments, whereas older children made strong moral judgments. Smetana and Ball’s findings suggest young children may have early prosocial and antisocial evaluation and preferences, but it does not independently establish a genetic basis for morality or demonstrate humans are born with a mature moral judgment (Limone & Toto, 2022).

The social relationships and moral development approach suggests that children develop morally through interactions with their parents and peers. The role of parents and guardians in moral development is crucial due to their continuous daily interactions. However, as people transition into adolescence, they are more likely to be influenced by peers, highlighting susceptibility to social factors that evolve across life stages. An experimental study conducted by Chiasson in 2017 found a linear increase in moral reasoning from infancy to late adolescence, with a significant group difference between childhood and pre-adolescence, indicating that morality strengthens as humans develop. This indicates that although young children can demonstrate early moral sense by preferring prosocial actions over antisocial actions, the complexity and strength of these preferences will continue to increase through continuous social interactions. (Limone & Toto, 2022).

The environmental factors and moral development approach holds that the physical environment provides young children with expectations of behavior, learning, space, sufficient supplies and materials, opportunities for engagement, and displays of individual work. The factors above influence the development of morality. Articles from this approach agree that a predisposition to prosociality may be present from birth, but argue that interactions between environmental factors and these infants' minds shape their behavior and social evaluation (Limone & Toto, 2022).

Limitations to Research

The number of studies included was small because of strict criteria used during the inclusion and exclusion process, therefore limiting the accuracy of the conclusion reached. The included studies used different research methods, participant ages, and theoretical approaches, making it difficult to compare their findings directly. This research only used studies reported in English. Studies reported in languages other than English, regardless of their usefulness, were deemed irrelevant to this systematic review, which may introduce language related bias into the findings.

STUDY 2: *YOUNG INFANTS PREFER PROSOCIAL TO ANTISOCIAL OTHERS, J. KILEY HAMLIN AND KAREN WYNN*

Research Methods

The study addresses the generality of infants' social preferences by asking whether infants in the first year of life evaluate those who behave prosocially and antisocially in two object-oriented goal scenarios: opening a box and retrieving a dropped object.

Experiment one used the scenario of opening a box to get a toy. Participants were healthy, full-term infants aged five and nine months. There were two experimental groups: the social condition group and the inanimate control group. Researchers used the inanimate control group to ensure infants' preferences were based on the social, rather than merely physical, aspects of the characters' behavior. Both groups had 16 nine-month-old infants and 18 five-month-old infants. In the social condition group, infants saw a plush animal hand puppet trying, with difficulty, to open the lid of a box. A prosocial puppet helped open the box, and the antisocial puppet slammed the box lid shut. The infants were encouraged to choose between the social and antisocial puppets after viewing the scenario. The inanimate control group had the same condition, except that an inanimate mechanical pincer was used (Hamlin & Wynn, 2011).

Experiment two used the scenario of retrieving a dropped ball. Participants were five-month-olds and three-month-olds. There were two experimental groups: the social condition group and the inanimate control group. Both groups had 12 five-month-olds and 12 three-month-olds. In the social condition group, infants were presented with a protagonist who played with a ball in the middle of a puppet stage, repeatedly jumping up and down and tossing and catching the ball. The protagonist loses the ball and a

"Giver" gives the ball back to the Protagonist, while a "Taker" takes the ball offstage. The infants were encouraged to choose between the social and antisocial puppets after viewing the scenario. The inanimate control group had the same condition, except that an inanimate mechanical pincer was used (Hamlin & Wynn, 2011).

Results

Experiment one showed infants in the social condition significantly preferred the opener over the closer puppet. Infants in the inanimate control condition showed a marginal preference for the Closer. Experiment two showed infants in the social condition significantly preferred the giver over the taker. Infants in the inanimate control condition did not prefer either puppet (Hamlin & Wynn, 2011).

The two experiments performed demonstrate that infants can show prosocial preferences in social scenarios. Infants are selective in their goal interpretations of animate versus inanimate actions. They can determine social scenarios and act only on living things, suggesting their responses were specific to social evaluations rather than simple movement patterns or physical outcomes alone. Infants' social evaluative capacities generalize beyond a single social scenario or goal type.

Limitations to Research

Infants' emotional reactions to the closing events and their finding the jumping/slamming behavior more interesting are confounding variables that could impact the dependent variable of choosing either the prosocial or antisocial puppet. While infants show a preference for helpers, it is unclear whether they understand the characters as having intentional goals, stable traits, or moral qualities, or whether they were responding to immediate behavioral patterns.

The puppet's static faces are another confounding variable. The puppet had static faces rather than distinct, changing facial expressions as humans do, the presence of which might influence infants' interpretations of an actor's behavior in ways that are not yet known. The use of puppets and simplified animated scenarios does not closely resemble real-world social scenarios, which may limit generalizability across all infants.

COMPARISON

Study 1 is a systematic review while Study 2 is an experiment. Study 1 examines the influences of nature and nurture on moral development, whereas Study 2 examines the nature of prosocial preferences in early infancy. While Study 1 synthesizes secondary data to demonstrate how social and environmental influences can shape long-term moral growth, Study 2 focuses exclusively on primary behavioral data showing that social evaluation emerges as early as preverbal infancy.

APPLICATION

Study 1 indicates that family interactions play an important role in shaping moral development over time. Parents and caregivers need to recognize that they can influence a child's moral development through modeling behavior, providing emotional support, and communicating what behavior is acceptable or unacceptable. Supportive and caring family environments can help children develop core moral traits such as empathy and fairness, shaping them to engage in prosocial behaviors. Conversely, unsupportive environments may hinder moral growth or decrease existing moral sense. These findings highlight how parenting strategies are crucial to a child's moral development.

Building on Study 2, since children already recognize helping behaviors as prosocial and harmful behaviors as antisocial from a very young age, schools can build anti-bullying programs that strengthen those natural prosocial preferences rather than only using punishments. Punishments like detention and suspension cannot strengthen a child's moral sense because they don't teach why an action is socially unacceptable. Therefore, schools can design programs that strengthen empathy, collaboration, and emotional understanding among students.

Furthermore, because children and adolescents are highly exposed to social media, social media serves as a main platform that shapes moral development. Positive online content that promotes moral traits like kindness and sharing may encourage prosocial behavior, while constant exposure to violence and cyberbullying may negatively affect moral development. Consequently, parents and educators should encourage positive media use, and content creators should provide positive moral role models through social media platforms.

RELEVANCE

The findings connect to the concepts of heredity and biological predispositions toward social evaluation. While Study 1 highlights early preferences for helping behaviors and Study 2 demonstrates infants' choices for prosocial individuals, these behaviors do not independently prove that a fully developed moral sense is genetically inherited. Instead, empirical research in behavioral genetics demonstrates that genetics provide foundational influences on prosocial inclinations that adapt across childhood (Knafo & Plomin, 2006; Scourfield et al., 2004). Rather than inheriting a fixed moral compass, infants inherit an evolutionary foundation that will continue to develop through social and environmental interactions.

The research connects to Jean Piaget's concept of schemas as foundational cognitive structures that organize and interpret environmental input. In Study 2, preverbal infants categorized behaviors into prosocial and antisocial categories. However, alternative explanations need to be acknowledged, as infant puppet choices may reflect low-level perceptual preferences rather than a fully intentional moral schema. These early schemas serve as cognitive building blocks, which expand and refine into complex moral rules as children undergo cognitive development.

Regardless of these early predispositions, morality will continue to be strengthened or weakened through society. The social learning theory developed by psychologist Albert Bandura states that people learn behaviors, attitudes, and beliefs by observing others. Interactions with caregivers, peers, and society can actively change a person's morals. Children learn by observing the people around them, seeing which actions are rewarded or discouraged.

Both studies emphasize that prosocial preferences form remarkably early in life. These early preferences for helping people over hindering others serve as the developmental groundwork for complex human behaviors such as empathy, altruism, and collaboration. Prosocial behavior is important in society as it supports social stability and human relationships.

Lastly, the studies relate to signature strengths and virtues in positive psychology, which focuses on human flourishing and well-being. Infants consistently prefer the "helper" showing signature strengths such as kindness, cooperation, and compassion, suggesting that sensitivity toward positive social virtues may emerge much earlier in development than previously believed, though mature virtue requires further development.

Future research could examine how morality develops across cultures and whether different environments shape how children develop morality. Researchers could also study whether an infant's prosocial preferences continue into later childhood and adolescence using longitudinal studies. In addition, future experiments could use a more realistic social situation rather than puppets to provide a deeper understanding of morality in infants.

CONCLUSION

The results of the two studies suggest that moral development is best understood as an interaction between innate tendencies and environmental influences; it is a combination of nature and nurture. Infants may be born with a genetic predisposition of moral sense, but morality can be strengthened or weakened by the environment. These findings are important because they suggest that moral development begins in early life and highlight the powerful role that families, schools, peers, and the media play in shaping moral behavior throughout life.

PERSONAL DISCUSSION

My name is Shiqi Xu, and I am a student from Green Hope High School. I took AP psychology class at my school and gained a strong interest in moral development because morality is a widely debated topic, where each person's interpretation can vary due to cognitive, cultural, and individual differences. People have different life goals and interpretations of the world, which can lead individuals to define "moral" differently. The answer to whether a behavior is "right" or "wrong" is based on one's moral principles, and I wanted to understand how individuals form these principles and apply them in daily life. I found infants showing early prosocial preferences to be surprising. This suggests that humans possess early

genetic predispositions toward social evaluation rather than acquiring all social behaviors from scratch. Ultimately, because the social environment shapes these early inclinations, supportive and stable interactions are essential for helping a child develop mature moral character.

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