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The Influence Mechanism of Social Norms on University Students' Online Academic Misconduct (Postprint)

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Abstract

[Purpose/Significance] With the popularization of the Internet and the widespread use of digital educational resources, academic misconduct has exhibited new characteristics distinct from traditional forms and a more rapid development trend. This study focuses on the influence of social norms on university students' online academic misconduct and explores the mediating variables affecting their relationship, aiming to deepen the understanding of the mechanism underlying online academic misconduct. [Method/Process] Given that the social nature of academic misconduct in the Internet environment has significantly increased, this research examines from a micro perspective how social norms influence online academic misconduct. Based on theories such as social cognitive theory of morality and the Four Component Model of morality, a sequential mediation effect model of perceived severity and moral judgment is constructed, and the model is tested using questionnaire survey data collected from students at three universities of different types in Shanghai. [Results/Conclusion] The study finds that social norms have not only a significant direct effect on online academic misconduct, but also a significant indirect effect. The indirect effect is generated through two mediation pathways: through the independent mediating role of moral judgment, and through the sequential mediating role of perceived severity and moral judgment. These results can provide more targeted countermeasures for the effective prevention and governance of online academic misconduct, offer a new perspective for examining academic misconduct, and enrich the academic research literature on academic misconduct.

Full Text

Preamble

A Study of the Impact Mechanism of Social Norms on College Students' Online Academic Misconduct

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Abstract: [Purpose/Significance] With the popularization of the Internet and the widespread use of digital educational resources, academic misconduct has exhibited new characteristics distinct from traditional forms and a more rapid development trend. This study focuses on the influence of social norms on college students' online academic misconduct and explores the mediating variables affecting this relationship, aiming to deepen understanding of the mechanisms underlying online academic misconduct. [Method/Process] Given the significantly enhanced social nature of academic misconduct in Internet environments, this research adopts a micro-level perspective to examine how social norms influence online academic misconduct. Based on theories such as social cognitive theory of morality and the four-component model, a sequential mediation model of perceived seriousness and moral judgment is constructed and tested using survey data collected from students at three different types of universities in Shanghai. [Result/Conclusion] Findings reveal that social norms exert both significant direct and indirect effects on online academic misconduct. The indirect effects operate through two mediating pathways: the independent mediating role of moral judgment, and the sequential mediating role of perceived seriousness and moral judgment. These results can inform more targeted strategies for effectively preventing and governing online academic misconduct, offer new perspectives for examining academic misconduct, and enrich the academic literature on this topic.

Keywords: social norm; perceived seriousness; moral judgment; online academic misconduct; college students

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Academic misconduct has long been a persistent problem worldwide and remains an important issue of continuous concern in education and academic research. China's Ministry of Education defines academic misconduct as "actions by higher education institutions, their faculty, staff, and students that violate recognized academic norms and breach academic integrity in scientific research and related activities" [?]. Based on this definition and the scope of academic misconduct in English literature [?], this paper refers to academic misconduct that includes not only research misconduct by faculty but also unethical academic behaviors by students, with the latter being the primary focus of this study.

In China, academic integrity issues have permeated every level of academia and

are relatively widespread [?]. Among researchers, scandals involving suspected fraud by prominent scholars and retractions of papers from international journals frequently make headlines. Among university students, approximately 50% believe that cheating on exams and paper fabrication occur frequently or occasionally [?]. Traditional academic misconduct can be categorized into four basic types: cheating, plagiarism, fabrication, and facilitating others' misconduct [?]. However, with the popularization of the Internet, smart devices, and digital educational resources, these categories have expanded considerably. Academic misconduct now features new characteristics distinct from traditional forms: obtaining needed information via the Internet has become the primary auxiliary means for engaging in misconduct, and online transactions (such as buying and selling papers and data) are becoming increasingly common. The Internet not only enriches the channels for committing academic misconduct and the information resources available for exploitation but also significantly reduces the difficulty and cost of participation, providing considerable convenience for its execution [?, ?]. Consequently, compared to traditional forms, academic misconduct in Internet environments has shown a more rapid development trend in recent years.

Academic integrity issues not only hinder the cultivation of students' moral character but also severely damage the reputation of universities and research institutions, shaking public trust in the intellectual community and even in science itself, and undermining the establishment of a society that values integrity. To seriously address academic misconduct such as plagiarism, buying, and ghost-writing of dissertations, the Ministry of Education issued relevant documents in August 2020, requiring universities nationwide to comprehensively review graduate dissertations from the past five years, strictly implement process management, and carry out warning education to promote academic ethics and academic atmosphere.

Given the changes in the academic environment and integrity behaviors caused by new media technologies, studying university students' online academic misconduct holds significant academic and practical importance. This research focuses on undergraduate students' unethical behaviors such as plagiarism, fabrication, and buying/selling of data and papers that utilize online resources as aids or online platforms as vehicles. Studies on academic integrity among student populations have a long history and rich literature, primarily focusing on the current status of academic misconduct [?], influencing factors, and prevention strategies [?]. Among influencing factors, which are the focus of academic misconduct research, scholars have paid widespread attention to individual internal factors (such as personality traits and morality) [?, ?] and external environmental factors (such as information technology and peer influence) [?, ?], particularly social environment-related factors (such as subjective norms and social pressure) [?].

However, to the authors' knowledge, although many scholars have found that social environmental factors significantly affect students' academic misconduct, few studies have explored the specific mechanisms through which social factors

influence academic misconduct. In traditional pre-Internet academic environments, individuals typically engaged in academic misconduct as relatively isolated personal acts with limited social reach and impact. In today's Internet environment, however, academic misconduct is more likely to form group effects both in terms of participation and radiation intensity, and more likely to ferment into social incidents (such as the 2019 "Zhai Tianlin academic fraud" case). This means the social nature of academic misconduct in Internet environments has significantly increased, making research on how new media may change social environments/norms and their impact mechanisms on academic misconduct particularly valuable. This study focuses on the influence of social norms on college students' online academic misconduct and explores mediating variables affecting this relationship to understand the specific mechanisms from a more micro-level perspective.

Literature Review and Research Hypotheses

Social norms are an important component of social environmental factors and a core concept in social psychology, referring to behavioral standards that are widely recognized and jointly adhered to in specific social groups or cultural contexts [?]. The important role of social norms in influencing individual behavioral decisions and explaining behavioral changes has been confirmed by numerous studies [?, ?, ?]. Cialdini and colleagues distinguished between descriptive norms and injunctive norms [?]: descriptive norms refer to individuals' perceptions of others' actual behaviors in specific social situations, while injunctive norms refer to individuals' perceptions of whether certain behaviors will be approved or disapproved by others [?]. Injunctive norms share the same conceptual meaning as subjective norms in the Theory of Planned Behavior [?] and are often used interchangeably in relevant research [?, ?].

This study focuses on the mechanism through which injunctive norms influence college students' online academic misconduct—that is, how the perceived attitudes of important others in their learning environment affect their behavioral decisions. Therefore, unless otherwise specified, social norms mentioned below refer to injunctive norms (subjective norms).

Multiple fields including psychology, sociology, and criminology have theories explaining the important role of social environment/norms in individual behavior, particularly moral behavior. According to psychologist L. Kohlberg's (1976) theory of moral development stages, most adolescents and college students' moral development belongs to the third stage (of six) within the second level (of three) conventional level, characterized by using others' judgment standards as the direction for developing self-moral concepts [?]. Individuals at this stage most desire recognition and affirmation from those around them, believing that behaviors meeting public expectations are good behaviors. Hirschi's (1969) social control (social bond) theory also clearly states that social relationships established by individuals (especially adolescents) with parents, relatives, teachers, and peers during socialization, along with their related social conditions and

expectations, are key factors controlling whether individuals engage in deviant behavior [?]. Bandura's social cognitive theory of morality similarly posits that individuals' moral standards are partly based on the reactions of "significant others" in life, such as parents and teachers, to their behaviors. When individuals' behaviors meet or exceed value standards, parents and others typically feel pleased; when their performance falls short of standards, they feel disappointed. Under the influence of these evaluative reactions, individuals eventually form self-affirming and constraining moral behavioral standards [?].

Although online academic misconduct has some new characteristics and forms, its essence remains deviant behavior violating academic norms, falling within the scope of (academic) moral behaviors covered by the above theories. Therefore, attitudes of others in individuals' social environments significantly impact their behavior. In this study, social injunctive norms refer to college students' perceptions of evaluative reactions from significant others regarding their potential online academic misconduct—that is, the attitudes (degree of approval/disapproval) held by parents, teachers, friends, and peers toward such behavior.

Based on the aforementioned theoretical perspectives, when individuals believe that significant others in their social environment will not disapprove of their academic misconduct, they tend to participate; conversely, when they perceive that parents, teachers, and friends hold opposing, rejecting attitudes toward the behavior, they may consider avoiding it [?]. Existing research also shows that injunctive/subjective norms are important predictors of whether individuals engage in academic misconduct. Koljatic et al. [?] found that parents' acceptance of academic misconduct significantly affects individuals' cheating behavior. Curtis et al. [?] found that both types of social norms (especially injunctive norms) can directly predict students' academic plagiarism. In summary, the stronger the negative attitudes individuals perceive from important others around them toward academic misconduct, the lower their likelihood of participating in online academic misconduct. Therefore, we propose:

H1. Social norms (disapproval tendency) have a significant negative predictive effect on individuals' online academic misconduct.

Organizational ethics is an important field studying moral/ethical decision-making. In a classic 1991 paper, renowned scholar T.M. Jones proposed the concept of moral intensity, referring to the criticality of specific moral issues in particular situations, and emphasized that moral intensity can effectively predict moral judgment and ultimately influence moral decision-making [?]. Moral intensity, as an issue-contingent factor related to the characteristics of moral problems themselves, can be classified as a third type of moral decision-making influence factor beyond individual factors (subject) and organizational factors (environment). Many empirical studies following Jones have demonstrated the significant impact of moral intensity on moral decision-making [?, ?]. In 1996, D.P. Robin et al. expanded the concept of moral intensity and proposed a similar but distinct new concept—perceived importance of an ethical issue (PIE) [?]. Robin et al. argued that since PIE emphasizes individuals' unique perceptions

of the importance of moral/ethical issues, it can better predict personal moral decision-making than moral intensity by being closer to behavioral intention or decision-making.

This study also believes that although PIE essentially belongs to individual internal factors, individual perception differences stem from multiple self and environmental variables such as varying degrees of moral sensitivity, moral development levels, values, external pressure and opportunities, and relationships with others [?]. To some extent, the PIE variable integrates various elements from the aforementioned first type of individual factors, second type of environmental factors, and third type of moral issue factors. Therefore, theoretically, this variable should effectively predict moral decision-making. Based on this, this study focuses on examining the mediating role of PIE in college students' online academic misconduct decision-making process. Given the non-integrity/immoral nature of this paper's topic and for semantic and logical coherence, PIE (perceived importance) is hereafter simplified as perceived seriousness.

Perceived seriousness, as the term suggests, emphasizes personal subjective perception rather than objective attributes of matters. Thus, different people may have completely different perceptions of the seriousness/morality of the same issue, and even the same individual may have different seriousness perceptions of the same issue at different times or in different contexts [?]. Social cognitive theory posits that individuals' social environments affect their internal cognition, and in most cases, the environment first influences cognition before affecting behavior [?]. Social influence-related theories also suggest that social norm factors (such as reward and punishment feedback from others) are one of the main reasons for changes in individual attitudes; individuals can form their own evaluations and judgments of things from social environmental reactions [?].

The social injunctive norms discussed in this study refer to college students' perceptions of the possible evaluative reactions from important others regarding their engagement in online academic misconduct—that is, the attitudes (degree of approval/disapproval) held by parents, teachers, friends, and peers toward such behavior. This social feedback mechanism naturally affects individuals' evaluation and cognition of the behavior. Specifically, injunctive norms influence individuals' perceptions of the seriousness (similar to moral intensity) of online academic misconduct as a moral issue. When individuals perceive that their parents, teachers, friends, and peers clearly hold negative attitudes toward online academic misconduct, they may internalize their perception of the seriousness (i.e., the immoral degree) of academic misconduct under social pressure. If individuals judge, based on their own experience, that negative attitudes and social pressure among surrounding people toward such behavior are low, they are likely to make relatively low seriousness judgments, believing that related behaviors will not have serious social consequences and thus ignoring the moral nature of the event itself. In short, social norms significantly influence individ-

uals' perceptions of the seriousness of online academic misconduct.

Moral intensity's predictive effect on moral decision-making/behavior has been confirmed by many studies [?, ?]. As a concept similar to moral intensity, the predictive effect of perceived seriousness on moral behavior also deserves attention. This study argues that when individuals perceive online academic misconduct as more serious, it indicates they better recognize the ethical components contained in related behaviors and are more aware of potential serious consequences (such as school punishment), making them more inclined to make ethical decisions to avoid participation. Conversely, individuals with low perceived seriousness tend to believe related behaviors will not have serious social consequences or significant moral implications, bearing less psychological burden for participating in online academic misconduct and being more easily driven by other factors to become perpetrators. Existing research also shows that perceived seriousness is significantly negatively correlated with individual academic misconduct [?, ?]. Based on the above discussion, we propose:

H2. Social norms indirectly influence individuals' online academic misconduct through the mediating effect of perceived seriousness.

J. Rest's four-component model of moral development posits that individuals' moral decision-making process includes four main aspects (steps): recognizing moral situations (moral sensitivity/awareness); making moral judgments; forming moral intentions (moral motivation); and implementing moral behavior [?]. Moral judgment is a core element of this model, referring to judgments about the moral right or wrong of a specific situation/issue. Generally, moral correctness is a basic prerequisite for individuals to decide to implement a behavior, so moral judgment can significantly predict individuals' moral decision-making (intention or behavior). The four-component model is widely applied in business ethics and other moral decision-making fields, and the predictive effect of individuals' moral judgment on moral decision-making has been verified in many studies. For example, Patrick et al. [?] found that moral judgment can significantly predict adolescents' participation in altruistic behavior, and other studies show that college students' moral judgment is negatively correlated with their antisocial behavior [?]. Reynolds et al. [?] found that moral judgment can independently influence moral behavior and, in some cases, interact with moral identity to affect moral behavior.

In this study, moral judgment refers to individuals' judgments about whether online academic misconduct is immoral. When individuals perceive online academic misconduct as immoral, and the stronger this perception, the more they tend to make non-participation decisions that conform to social ethics. Therefore, moral judgment should significantly predict academic misconduct. Regarding antecedents of moral judgment, social norms as social environmental variables may also affect individuals' moral judgment. As previously mentioned, individuals' judgments and evaluations of specific situations/behaviors are easily influenced by their social environment and relationships. In terms of moral cognition, college students already have the ability to interpret moral meanings

from others' reactions in their social environment, and evaluative reactions from important others such as parents and teachers may directly affect their cognition of related situations/behaviors. When individuals' parents, relatives, and friends approve of a behavior, individuals tend to be influenced to believe the behavior is correct and acceptable—that is, social norms can affect individuals' evaluations of specific behaviors, a relationship confirmed in existing research [?, ?]. Specifically, if individuals perceive that people around them react negatively, critically, or punitively toward academic misconduct (the higher the degree of negative social norms), they tend to judge the behavior as norm-violating and immoral. Conversely, if individuals perceive low social pressure to engage in related behaviors, their judgment of the immorality of such behaviors will also be lower. Therefore, we propose:

H3. Social norms indirectly influence individuals' online academic misconduct through the mediating effect of moral judgment.

In summary, both perceived seriousness and moral judgment may serve as mediating variables between social norms and online academic misconduct. What, then, is the relationship between these two mediators? As mentioned above, Rest' s four-component model proposes that the first step in moral decision-making is recognizing whether a specific situation/behavior has moral attributes. Perceiving that a situation/behavior has moral-ethical attributes is a prerequisite for individuals to make moral judgments. Due to differences in individual physical and psychological development, individuals' moral sensitivity also varies. D.P. Robin et al. believe that perceived seriousness is similar to moral sensitivity and thus propose the hypothesis that perceived seriousness is significantly related to moral judgment [?]. Their research and that of many other scholars have proven that individuals' perceived seriousness/importance of matters can significantly predict their moral judgments of specific situations/issues [?]. Specifically, when individuals perceive a behavior as more serious, they tend to judge that the behavior has moral-ethical components and are thus more likely to judge the behavior as immoral. This means that in this study, individuals' perceptions of the seriousness of online academic misconduct should significantly predict their moral judgments of such behavior.

Meanwhile, the aforementioned discussion also covered the outcome variable of moral judgment: moral judgment of academic misconduct can significantly predict actual academic misconduct. Combining the discussions of relationships among these factors, we infer that perceived seriousness and moral judgment have a sequential mediating effect in the relationship between social norms and online academic misconduct.

H4. Social norms influence online academic misconduct through the sequential mediating effect of perceived seriousness and moral judgment.

The final conceptual model constructed in this study is shown in Figure 1 [Figure 1: see original paper].

Research Methods

3.1 Participants and Procedure

This study employed a questionnaire survey method. Before the formal survey, a pretest was conducted with 50 questionnaires collected from two undergraduate classes. The pretest showed that most core variables had good reliability and validity, though some variables did not reach ideal reliability levels. Therefore, the number and wording of relevant items were adjusted based on pretest results.

The formal survey was conducted in March 2020. To ensure sample representativeness, undergraduate students from one comprehensive key “985” university and two municipal ordinary universities in Shanghai were selected as target respondents. Researchers then distributed questionnaires to students from different majors in these three universities as representatively as possible. Specifically, project team members and contacts from various majors at each school (found through offline resources) posted questionnaire links in relevant class, grade, or club WeChat groups, with a 2 RMB WeChat red packet sent to each respondent as a token of appreciation. A total of 512 questionnaires were collected, and after eliminating those with obvious logical contradictions or insufficient response time (using 120 seconds as the minimum duration standard), 475 valid questionnaires remained, yielding a validity rate of 92.77%.

3.2 Measures

Social (Injunctive) Norms were measured using an adapted subjective norms scale from the Theory of Planned Behavior [?], consisting of 5 items asking about individuals’ perceptions of possible attitudes and reactions from friends, classmates, family members, and teachers if they discovered the individual’s academic misconduct (e.g., “If my friends discovered my academic misconduct, they wouldn’t mind” ; “If classmates around me discovered my academic misconduct, they would look down on me”). Participants responded using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) ($\alpha = 0.79$). Individual items were reverse-coded where necessary before averaging to create the social norms variable score, with higher scores indicating more negative perceived attitudes from important others toward academic misconduct.

Online Academic Misconduct was measured using a 5-point Likert scale (1 = never, 5 = always), asking participants to select the frequency of their actual online academic misconduct during their studies. The scale listed 14 types of online academic misconduct developed based on existing literature and scales, specifically targeting common forms in online environments. Sample items include: “Copying others’ homework/papers/results from the Internet without attribution or citation” ; “Fabricating, modifying, or integrating online data or materials for use in one’s own homework or papers” ; “Hiring someone to write or buying graduation papers through online contact or transactions” ; “Ghostwriting or selling graduation papers or journal submissions through online contact or transactions.” The scale demonstrated good reliability ($\alpha =$

0.89). Scores were averaged, with higher values indicating higher frequency of online academic misconduct.

Perceived Seriousness was measured using an adapted Perceived Importance of an Ethical Issue scale developed by D.P. Robin et al. [?]. Participants used a 5-point Likert scale (1 = completely okay, 5 = very serious) to rate the seriousness of each of the 14 types of online academic misconduct. This measurement method for perceived seriousness is widely used in existing literature [?, ?]. The scale showed excellent reliability ($\alpha = 0.95$). Scores were averaged, with higher values indicating greater perceived seriousness of these academic misconduct behaviors.

Moral Judgment was measured using a scale adapted from the moral judgment scale proposed by R.E. Reidenbach et al. [?], consisting of 5 items testing individuals' views on whether online academic misconduct is immoral (e.g., "Online academic misconduct is morally wrong" ; "Online academic misconduct is essentially not wrong"). Participants responded using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The scale demonstrated good reliability ($\alpha = 0.72$). Individual items were reverse-coded where necessary before averaging, with higher scores indicating stronger belief that academic misconduct is morally wrong.

Data Analysis and Results

4.1 Descriptive Statistical Analysis

Data analysis showed that 46.9% of respondents were male and 53.1% female. Age ranged from 17 to 25 years, with an average of 20.5 years. 61.5% of respondents were from key universities and 38.5% from ordinary provincial/municipal universities. In terms of grade distribution, lower-grade students (freshmen and sophomores) accounted for a slightly lower proportion (about 40%), while upper-grade undergraduates accounted for about 60%. Regarding major distribution, based on conventional classifications and combining literature's focus on relevant majors [?, ?], disciplines were categorized as follows: engineering (43.2%), literature (22.9%), science (10.9%), economics and management (10.9%), medicine (8.2%), and law (3.8%).

Table 1 presents basic descriptive statistics and Pearson correlation coefficients among core variables. Data show that all variables were significantly correlated: online academic misconduct was significantly negatively correlated with social norms, perceived seriousness, and moral judgment; moral judgment was significantly positively correlated with social norms and perceived seriousness; perceived seriousness was significantly positively correlated with social norms.

Data also show that respondents generally considered online academic misconduct to be quite serious ($M = 4.31$, $SD = 0.67$, mean far above the midpoint), while self-reported overall participation frequency in online academic misconduct was quite low ($M = 1.35$, $SD = 0.42$, mean far below the midpoint). Given

that the questionnaire investigated 14 types of online academic misconduct, the authors further explored whether frequencies and attitudes toward these behaviors differed by category. Exploratory factor analysis was conducted on these 14 behaviors and corresponding seriousness items. The KMO values for behavior and seriousness items were both 0.93, with $\chi^2 = 8157/7583$ ($df = 91$, $p = 0.000$), meeting the prerequisites for factor analysis. Using principal component extraction and orthogonal rotation with varimax rotation, two common factors were extracted, explaining 74.89% (behavior) and 76.73% (perceived seriousness) of total variance. Data show that the 14 types of online academic misconduct can be divided into two categories (see Table 2 for specific items): the first category includes four relatively common individual information retrieval behaviors such as casually citing online materials without attribution and obtaining exam/homework questions or answers through online channels ($\alpha = 0.78$); the second category includes various course assignment and paper buying/selling behaviors conducted through Internet contact or transactions ($\alpha = 0.97$). This latter category involves money and multi-party transactions, is more serious in nature, and belongs to what the literature calls contract cheating [?]. Paired samples t-tests further showed that college students perceived the seriousness of online information retrieval misconduct ($M = 3.85$, $SD = 0.77$, $\alpha = 0.82$) to be significantly lower than that of contract cheating ($M = 4.50$, $SD = 0.73$, $\alpha = 0.97$), $t = -19.47$, $p < 0.001$. Correspondingly, self-reported frequency of online information retrieval misconduct ($M = 1.89$, $SD = 0.72$) was significantly higher than contract cheating frequency ($M = 1.14$, $SD = 0.45$), $t = 22.03$, $p < 0.001$. Although frequencies of both types of misconduct were below the midpoint, in terms of participation rates, 84% of participating college students had engaged in online-related cheating behavior, with 19% having engaged in online contract cheating and 82% having participated in information retrieval misconduct.

4.2 Sequential Mediation Effect Test

The authors used Model 6 from the PROCESS macro compiled by A.F. Hayes (2012) [?] to test the mediating effects of perceived seriousness and moral judgment between social norms and online academic misconduct. If the bias-corrected bootstrap confidence interval at 95% confidence level does not contain 0, the mediating effect is considered established [?]. Given that many studies have found gender significantly affects academic misconduct [?], this study controlled for gender.

Regression analysis results showed that overall, social norms significantly negatively predicted online academic misconduct ($\beta = -0.27$, $p < 0.001$), supporting H1. Social norms significantly positively predicted perceived seriousness ($\beta = 0.40$, $p < 0.001$). Both social norms ($\beta = 0.34$, $p < 0.001$) and perceived seriousness ($\beta = 0.36$, $p < 0.001$) significantly positively predicted moral judgment. When social norms, perceived seriousness, and moral judgment were entered simultaneously into the regression equation, both social norms ($\beta = -0.11$, $p < 0.05$) and moral judgment ($\beta = -0.31$, $p < 0.001$) significantly negatively pre-

dicted academic misconduct, but perceived seriousness could not significantly predict academic misconduct ($\beta = -0.03$, $p > 0.05$).

Mediation test results (see Table 4 and Figure 2 [Figure 2: see original paper]) showed that social norms could directly affect individuals' online academic misconduct, with a direct effect value of -0.07. Perceived seriousness and moral judgment partially mediated the relationship between social norms and academic misconduct, with a mediating effect value of -0.11, accounting for approximately 60% of the total effect of social norms on academic misconduct (-0.18). Specifically, the mediating effect consisted of three indirect effects (two of which were significant): indirect effect 1 through the path "social norms \rightarrow perceived seriousness \rightarrow online academic misconduct"; indirect effect 2 through the path "social norms \rightarrow moral judgment \rightarrow online academic misconduct"; and indirect effect 3 through the path "social norms \rightarrow perceived seriousness \rightarrow moral judgment \rightarrow academic misconduct."

The bootstrap 95% confidence interval for indirect effect 1 included 0, indicating that indirect effect 1 did not reach significance. Therefore, the mediating effect of perceived seriousness between social norms and online academic misconduct is not significant, and H2 is not supported. However, the bootstrap 95% confidence intervals for both indirect effect 2 and indirect effect 3 did not contain 0, indicating that these two indirect effects reached significant levels, with significant mediating effects. Thus, both H3 and H4 are supported.

Main Findings and Discussion

This study explored the influence of social norms on online academic misconduct and its specific mechanisms. Findings indicate that social norms exert both significant direct and indirect effects on online academic misconduct. The indirect effects are generated through two mediating pathways: the independent mediating effect of moral judgment; and the sequential mediating effect of perceived seriousness and moral judgment.

Regarding the current status of online academic misconduct, this study's data show that such behaviors can be categorized into two types: information retrieval and contract cheating. Although college students self-reported very low average participation frequencies for both types, the prevalence of participation is quite high: overall, 84% of respondents had engaged in online-related academic misconduct, with 19% having engaged in online contract cheating. Internationally, British scholar P.M. Newton [?] conducted a meta-analysis of English literature on contract cheating in higher education from 1978 to 2016 and found that both contract cheating and overall academic misconduct among college students showed a slow but year-by-year increasing trend. Regarding participation rates in contract cheating, the average across all study samples (65 papers) was 3.52%, with the lowest sample reporting 0% and the highest exceeding 20%. However, that study did not distinguish between online and offline contract cheating nor discuss the Internet's role in this increasing trend.

The authors found that both the overall rate of online academic misconduct and the participation rate in contract cheating among Chinese college students have essentially reached the highest rates found in that meta-analysis, not merely the average rates. Compared to the international average of 3.52%, China's rates of 19% for online contract cheating and 84% for overall online academic misconduct warrant serious attention: the current Internet-based academic environment has indeed greatly enriched channels for committing academic misconduct and available information resources while significantly reducing the difficulty and risk of detection, leading to increasingly common and rapid growth of academic misconduct in Internet environments in China (and possibly abroad); based on the convenient platform provided by the Internet, and due to differences in academic environments, cultures, and mechanisms, China's current situation regarding online academic misconduct, particularly contract cheating, has reached a serious level internationally when compared to existing English literature data.

All hypotheses except H2 were supported in this study. First, social injunctive norms have a significant negative predictive effect on online academic misconduct—that is, the more clearly negative attitudes or disapproval tendencies toward online academic misconduct that individuals perceive among “important others” around them, the lower their participation in online academic misconduct—supporting H1. This finding verifies the important influence of social environments, particularly social relationships, on individual behavior as explained by relevant theories in psychology and sociology. As social members, individuals have the need to establish and maintain social relationships, thus generating motivation to comply with social norms to gain social recognition and avoid social exclusion. Meeting public expectations, especially gaining the expectations or affirmation of important others such as parents, relatives, and classmates, is a key element for adolescents and college students in developing self-moral concepts, forming individual moral standards, and making moral decisions. Social injunctive norms reflect, to some extent, the appropriateness of related behaviors [?] and serve as an important basis for individuals to judge whether their behaviors can gain social recognition. Online academic misconduct is deviant behavior violating academic norms. For college students, the evaluative reactions of important others in their social environment toward such behavior (such as opposition, criticism, reporting) and the resulting social pressure naturally affect their final behavioral decisions: the stronger the negative attitudes indicated by social injunctive norms, the greater the social pressure, the poorer the appropriateness of such behaviors, the stronger students' self-constraint willingness, and the less likely they are to participate in online academic misconduct. This conclusion is consistent with the influence mechanisms of traditional offline academic misconduct, indicating that in new media environments, academic integrity education should also emphasize the impact of relevant environmental factors such as schools, families, and society on individual students, giving full play to the key role of social relationships and injunctive norms in students' academic moral education.

Perceived seriousness is one of the core variables in this study' s mediation

model. Although data show that social injunctive norms can significantly predict individuals' perceptions of the seriousness of online academic misconduct, perceived seriousness cannot directly and significantly predict online academic misconduct. Therefore, H2's proposed independent mediating effect of perceived seriousness between social norms and online academic misconduct is not supported. However, data show that perceived seriousness can affect individuals' academic misconduct through its influence on moral judgment of online academic misconduct—that is, the sequential mediating effect proposed in H4 exists.

As previously mentioned, social environments often first affect individual cognition before affecting behavior. When college students perceive that their parents, teachers, and peers clearly hold negative attitudes toward academic misconduct, they make corresponding seriousness judgments, believing that online academic misconduct may have serious social consequences or inappropriateness, thereby paying attention to the moral attributes of the event itself. This study confirms the first half of the mediating path in H2—that social injunctive norms can significantly predict perceived seriousness. However, the second half of the mediating path differs from our expected hypothesis: individuals' perceptions of the seriousness of related behaviors cannot directly affect their moral decisions (i.e., implementation of online academic misconduct). This result is inconsistent with previous literature finding that perceived seriousness significantly negatively predicts (online) academic misconduct [?] but consistent with multiple studies on mediating variables in moral decision-making [?, ?]—that is, perceived seriousness has no significant direct effect on moral intention/behavior but has an indirect effect through moral judgment (the sequential mediating effect in H4).

The reason may be that academic misconduct literature found perceived seriousness significantly affects academic misconduct likely because those studies only used multiple regression analysis to test the overall effect of perceived seriousness on moral behavior without exploring its micro-level influence paths (indirect effect exists, direct effect does not). Based on this finding, this study verifies the key factors and paths of moral decision-making proposed by Rest's four-component model in the case of (online) academic integrity: moral awareness (perceived seriousness) affects moral intention/behavior through moral judgment. This also suggests that to effectively prevent college students' academic misconduct, academic integrity empirical research can expand beyond exploring basic influencing factors (such as environmental impact) to further investigate the specific paths through which these factors affect academic misconduct, enabling more targeted interventions for college students' academic misconduct.

In addition to its sequential mediating effect with perceived seriousness, moral judgment also has an independent mediating effect between social norms and online academic misconduct, with this independent mediating effect accounting for a significantly larger proportion than the sequential mediating effect. This indicates that social injunctive norms can indirectly affect individuals' online aca-

ademic misconduct by influencing moral judgment: the stronger the negative attitudes toward online academic misconduct that college students perceive among important others around them, the more they tend to judge related behaviors as morally wrong, and the less likely they are to participate. Both its independent and sequential mediating effects demonstrate that moral judgment is an important factor affecting individual online academic misconduct and a key link in the specific mechanism through which social injunctive norms influence individual academic misconduct. As previously stated, for adolescents and college students, the moral judgment standards and evaluative reactions of others in their social environment are crucial for forming self-moral concepts and implementing self-affirming and constraining moral behavioral standards. Moral judgment reflects individuals' moral cognition of related behaviors, and negative attitudes from important others prompt individuals to judge related behaviors as morally wrong. In social environments, most people refrain from doing what they know they shouldn't (avoiding immoral behavior), thereby curbing online academic misconduct. The explanatory power of moral judgment highlights the key role of individual cognition (moral awareness and related judgments) in preventing and governing online academic misconduct. Based on this finding, schools, families, and relevant institutions can adopt theoretical and practical measures such as education, punishment, and home-school collaboration to strengthen students' perceptions of the seriousness of online academic misconduct, thereby enhancing their cognition of the immorality of related behaviors and guiding students to correctly judge the moral attributes of academic misconduct, ultimately achieving the goal of students consciously refusing to participate in online academic misconduct.

Contributions, Limitations, and Future Directions

This study explored the influence of social injunctive norms on online academic misconduct and the sequential mediating roles of perceived seriousness and moral judgment. Given that most existing literature on factors influencing academic misconduct adopts a relatively macro perspective focusing on enumerating various factors, this study started from social environmental factors and examined from a micro-level perspective how social norms affect online academic misconduct through the mediating roles of moral awareness (perceived seriousness) and moral judgment. Verifying this mechanism can help clarify the interaction between external social environments and individual internal moral cognition in curbing online academic misconduct, providing more targeted strategies for practice. This not only deepens our understanding of the mechanisms underlying online academic misconduct but also enriches academic misconduct research literature by offering new perspectives for examining this issue.

Furthermore, as mentioned earlier, in the current Internet-based academic environment, academic misconduct has emerged with new platforms, phenomena, and methods. Focusing on online academic misconduct enriches existing lit-

erature that primarily addresses offline academic misconduct, adds knowledge about influencing factors and mechanisms of online academic misconduct, and provides opportunities for comparison with traditional academic misconduct mechanisms to further understand whether academic misconduct in Internet environments has new characteristics and mechanisms. Additionally, as some scholars have pointed out, academic integrity issues cannot be adequately addressed through institutional construction alone, and moral-ethical constraints can provide effective supplements [?]. This study found that perceived seriousness and moral judgment are significant mediating variables affecting academic misconduct, and both are subjectively perceived variables related to morality. Therefore, in actual educational practice, educators, educational institutions, and families can adopt corresponding measures to guide college students' moral judgments of online academic misconduct, thereby constraining their academic misconduct from the perspective of their own moral-ethical cognition and ultimately promoting the development of academic integrity.

This study's limitations mainly include: First, in terms of research methods, it followed the self-report questionnaire method. Due to the rule-violating nature of online academic misconduct, respondents' self-reported frequencies of their own online academic misconduct may be lower than actual levels, potentially affecting research results. Second, regarding sample selection, although this study included respondents from both key and ordinary universities, the sample size from key universities was larger. Additionally, all participating students were from Shanghai, making the results insufficiently representative of the broader college student population in China. Given that master's and doctoral students face more prominent tasks and pressures regarding paper publication, academic misconduct assisted by the Internet (such as paper plagiarism, buying, and ghostwriting) may be more common among graduate students. Therefore, future research could conduct surveys specifically targeting graduate student populations. Moreover, considering that academic integrity issues may be closely related to university type, future research could further increase samples from other universities, particularly ordinary institutions and other cities. Given possible differences in academic environments, supervision mechanisms, and cultural influences on moral cognition between China and other countries, future studies could also consider collecting data in other countries for comparative research.

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