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SANTA CRUZ

**ACADEMIC CHEATING AMONG SOCIAL SCIENCE
AND ENGINEERING UNDERGRADUATES**

A dissertation submitted in partial satisfaction
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

PSYCHOLOGY

by

Talia Waltzer

March 2022

The Dissertation of Talia Waltzer is
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Abstract

Academic cheating among social science and engineering undergraduates

Talia Waltzer

Academic cheating—a common and consequential form of dishonesty—has puzzled moral psychologists and educators for decades. The present research examined a new theoretical approach to the perceptions, evaluations, and motivations that shape students' decisions to cheat. I tested key predictions of this approach by systematically examining students' accounts of their own cheating. In two studies, I interviewed undergraduate students in psychology ($n = 68$) and engineering ($n = 123$) classes about their past experiences with plagiarism or other forms of cheating. Interviews assessed students' perceptions of whether they were cheating, their evaluations of whether their actions were okay, and their motivations for doing what they did. Most students did not initially recognize their acts as cheating. While students generally thought cheating was wrong, they often judged the exceptional cases in which they cheated to be acceptable, citing concerns such as assignment goals and task feasibility. The findings suggest that perceptions, evaluations, and competing motivations play a key role in students' decisions to cheat.

Acknowledgments

There is a Chinese idiom, 同心协力 (tóng xīn xié lì). It is similar to the saying, "it takes a village to raise a child." This phrase is very applicable to my doctoral training. My dissertation is the culmination of the efforts of many people. I am honored to acknowledge them here.

Thank you to the faculty at the University of California, Santa Cruz (UCSC) who mentored and supported me. Thank you to my dissertation committee: Rebecca Covarrubias, Audun Dahl, and Barbara Rogoff. I am especially grateful to my thesis advisor, Audun, who has encouraged me, listened to me, advocated for me, worked alongside me, and taught me so much. Audun, I am relieved by your seemingly endless patience, uplifted by how you respect me as an individual, and inspired by your superhuman ability to do everything.

Thank you to the individuals and programs that partnered with me to grow this research and promote integrity at UCSC. I am grateful for my collaborations with the Center for Innovations in Teaching and Learning, Baskin School of Engineering, Council of Provosts, and the Division of Undergraduate Education. Special thanks goes to Alan Christy, Jody Greene, Richard Hughey, Tracy Larrabee, and Flora Lu.

CHAPTER 1

Background and Motivation

Academic cheating presents a psychological puzzle and an educational challenge. Nearly all college students report that they have cheated (Curtis & Vardanega, 2016; Hale, 1987; McCabe et al., 2012; Whitley, 1998). When students cheat, they seem to violate widely shared values of honesty and academic integrity and jeopardize their learning and academic success. Why do students act in apparent conflict with these widely shared values? The question has puzzled scholars and educators seeking to understand and reduce student cheating (Rettinger et al., 2017; Stephens, 2018). One possibility, explored by much prior research, is that students either disengage their moral concerns about honesty and integrity or lack such concerns altogether (Bandura, 2016; Haines et al., 1986; McCabe, 1997; Sykes & Matza, 1957). Another possibility, explored by the present research, is that most students genuinely care about academic integrity, but occasionally cheat when they (1) fail to perceive their act as cheating, (2) evaluate cheating as permissible in certain circumstances, or (3) decide to prioritize unusually pressing motives over their motivations to act with integrity (Dahl & Waltzer, 2018; Waltzer & Dahl, 2020).

The proposal that students cheat because of unusual and situation-specific perceptions, evaluations, and motivations derives from prior research on moral psychology and moral development (Dahl & Killen, 2018). This work has shown that perceptions about the social world shape evaluations (Wainryb, 1991), that people sometimes deem it acceptable to violate one general principle to prioritize another

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(Dahl et al., 2018; Nucci et al., 2017), and that evaluations, alongside other motivations, guide decisions (Ajzen & Fishbein, 2005). Unlike frameworks that account for cheating based on stable characteristics of individuals or institutions, this framework for situational decision-making can help explain why most students refrain from cheating in most situations yet decide to cheat in some situations (Kohlberg, 1971; Turiel, 2003).

Testing theories about why students decide to cheat requires data on cases of student cheating. Despite the obviousness of this need, there is a dearth of systematic research on students' decisions to cheat in concrete situations. To address this need, and evaluate the proposed theory of why students cheat, two studies examined college students' accounts of their past acts of academic cheating. I interviewed and surveyed students from social science and engineering classes to understand how they thought about hypothetical and actual cases of cheating. The goal of the research was to examine the role of *perceptions, evaluations,* and competing *motivations* in students' decisions to cheat.

Academic Cheating: A Pervasive and Consequential Form of Dishonesty

Academic cheating is a pervasive and consequential form of dishonesty, prompting moral psychologists and educators to ask why students cheat. For centuries, scholars have discussed the virtue of honesty (Kant, 1785/2012; Miller, 2021) and people have striven to act honestly and avoid lying in their everyday lives (Levine et al., 2010; Rundle et al., 2019; Waltzer et al., 2019). But although most people say cheating is wrong, nearly all students cheat at least once in their academic

careers (Davis et al., 1992; Murdock et al., 2016; Stephens, 2018; Waltzer & Dahl, 2020). This apparent gap between judgments and actions has shaped decades of research on moral character and the role of values in people's decisions about cheating in everyday life (Bertram Gallant & Stephens, 2020; Hartshorne & May, 1928; Rettinger, 2017; Stephens, 2018).

I define *academic cheating* as any action that violates academic rules and, if carried out successfully, would yield advantages to one or more students (Barnhardt, 2016; Cizek, 2003; Murdock et al., 2016). Academic rules, which may be written or unwritten, are issued by academic authorities (e.g., institutions, instructors) and regulate how students should complete scholarly work. By this definition, cheating may be intentional or unintentional since students may violate academic rules of which they are unaware.

Plagiarism, a particularly common type of cheating, involves presenting others' words or ideas as one's own in an academic assignment (Moss et al., 2018; Park, 2003). Plagiarism can be particularly difficult for students to perceive. The lines between plagiarism and appropriate paraphrasing are often blurry, which can generate considerable disagreement among students and instructors about what constitutes plagiarism (Roig, 1997, 2001; Waltzer & Dahl, 2020). Thus, in the present research, I examined students' accounts of both plagiarism and other types of cheating.

Academic integrity is integral to students' success. If students are not concerned about honesty in their academic work, their actions can undermine fair assessment, they risk missing learning opportunities, and they can ultimately be

removed from school (Cizek, 2003; Lang, 2013; McCabe et al., 2012). Cheating can also undermine students' feelings of belongingness in school and threaten the retention of diverse student populations, particularly in STEM fields (e.g., Mervis, 2011). Beyond the classroom, some authors have argued that cheating within a society can undermine respect for rules and institutions and foster a culture of dishonesty (Gino et al., 2009; Jensen et al., 2002). To reduce cheating, it is crucial to understand why students cheat.

Situated Decisions About Cheating

Recent advances in research on moral psychology and moral development offer a framework for explaining the puzzle of why students decide to cheat (Dahl & Killen, 2018; Killen & Dahl, in press). This work has pointed to several factors that can lead children and adults to act in violation of general principles of right and wrong. First, people may not *perceive* an act as relevant to their general principles, for instance because they do not think the act is harmful or deceptive (Wainryb, 1991). Second, people may *evaluate* the act positively because they believe it is permissible to violate one principle to adhere to another, as when someone judges that lying is permissible when it protects another person's welfare. By coordinating competing moral and non-moral concerns, people sometimes make exceptions to general principles. Notably, such exceptions are not necessarily self-serving: People also make such exceptions from a third-person point of view, when evaluating the actions of others (Dahl et al., 2018; Perkins & Turiel, 2007). Third, people may face strong competing *motivations* pushing them toward transgressing, for instance the

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need to pass a class to remain in one's intended major (Turiel & Dahl, 2019). However, the fact that people occasionally do what they judge to be wrong does not mean that they lack moral concerns. After they have committed an act they deem wrong, people's moral concerns often persist and give rise to feelings of conflict and guilt (Dahl & Waltzer, 2018; Turiel, 2003).

This framework for explaining why students sometimes cheat—based on situation-specific perceptions, evaluations, and motivations—differs from prior accounts of student cheating. Before detailing my predictions, I will briefly contrast my framework with two other approaches to explaining cheating.

According to one perspective, students do not reliably care about honesty and academic integrity. When presented with opportunities to cheat, according to this approach, students either view cheating as acceptable or they "disengage" or "neutralize" their principles against cheating in order to pursue their own self-interest (Ariely, 2012; Bandura, 2016; Bidgood & Merrill, 2017; Fang & Casadevall, 2013; Haines et al., 1986; Schab, 1991; Sykes & Matza, 1957). This perspective implies that most acts of cheating are intentional and unconflicted, since—it is hypothesized— students judge their acts of cheating as acceptable. In contrast, I hypothesize that students often cheat unintentionally, do not generally accept cheating, and are often conflicted about their own acts of cheating.

A second prior approach has instead sought to identify individual and institutional predictors of cheating. These approaches have found relations between rates of cheating and individual characteristics such as GPA (Bunn et al., 1992;

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Whitley, 1998), gender (Teixeira & Rocha, 2010), international student status (Bertram Gallant et al., 2015), and Big Five personality traits (Lee et al., 2020). At the institutional level, scholars have predicted rates of cheating based on academic major or use of honor codes (McCabe et al., 2012). Although these approaches have revealed important insights about categories of students or institutions with higher rates of cheating, they cannot account for the situational variability of cheating. That is, stable characteristics of individuals or institutions cannot account for how the same student in the same institution will cheat in some situations but not other situations.

In contrast to these prior accounts, my account of cheating proposes that decisions to cheat involve three key factors that vary from one situation to another: *perceptions, evaluations,* and competing *motivations*.

Perceptions: Does This Action Count as Cheating?

One possible contributor to student cheating is that they fail to perceive their acts as cheating. Students' perceptions of cheating are central to their decisions. Students cannot reliably avoid cheating if they do not know what cheating is, or if they fail to recognize specific actions as violations. In these cases, students are at risk of cheating unintentionally. I theorize that perceptions are a crucial source of cheating; thus, I expect that many instances of cheating are unintentional or involve ambiguities at the perception step. The prevalence of such unintentional cheating is difficult to assess, however, because few prior studies have examined naturally occurring academic cheating.

Some prior research offers initial support for how students' perceptions shape

their decisions about cheating. For instance, features of potential cheating acts (e.g., type of assignment, extent of copying) significantly predict students' judgments about those acts (Waltzer & Dahl, 2021). Still, there is substantial disagreement among students and instructors about whether specific acts constitute cheating (Deckert, 1993; Roig, 1997, 2001; Waltzer & Dahl, 2021). Such disagreements could account for many cases of cheating. Norms for what constitutes cheating can vary across disciplines and even classes (Borg, 2009; Gullifer & Tyson, 2014; Nathan, 2005). Some research suggests that international students and non-native speakers are especially likely to misunderstand these norms (Park, 2003; Shi, 2004). These students may face extra challenges in distinguishing plagiarism from non-plagiarism.

Unintentional cheating has received little attention in prior research. For instance, when McCabe et al. (2012) listed the main reasons why students cheat, they mentioned "parental expectations, pressures to get good grades, and attribution of blame to others" (p. 33), but they did not mention lack of knowledge about what constitutes cheating. By interviewing students about whether they perceived their prior acts as cheating at the time of the event, the present research examined the extent to which inaccurate perceptions can explain why students cheat.

Evaluations: Would Cheating in This Situation be Acceptable?

A second possible reason why students cheat is that they think cheating is acceptable in a particular situation, even if they think cheating is generally wrong. Students' concerns with right and wrong play a major role in decisions about cheating. The judgment that cheating is wrong in a given situation will push students

to refrain from cheating in that situation; conversely, the judgment that cheating is acceptable may leave students with few reasons to refrain (Harding et al., 2007; Miller et al., 2011; Waltzer & Dahl, 2020). I theorize that a strong concern for honesty and integrity drives students to avoid cheating in most cases, even when they could do so without consequences (Levine et al., 2010; Waltzer et al., 2019). However, the rare cases where they do opt to cheat will be the ones in which they see cheating as more permissible. Thus, I predict that students will generally evaluate cheating as wrong but evaluate the cases in which they cheat more positively.

Prior research highlights the close relations between evaluations and decisions (Ajzen & Fishbein, 2005; Turiel, 2003). Students' general attitudes predict their general patterns of behavior, whereas their attitudes toward specific actions predict their action choices in those specific situations (Ajzen & Fishbein, 2005; Lee et al., in press). For instance, people generally refrain from lying and mostly lie for specific and circumscribed reasons (Levine et al., 2010; Waltzer et al., 2019). Similarly, students' evaluations of cheating predict their own inclinations to cheat in those same situations (Jensen et al., 2002; Waltzer et al., in press). People evaluate cheating and other dishonesty more positively if it is motivated by pressure, perceived injustices, or protecting others' welfare compared to cases where the cheater just thinks they can get away with it or does not have obvious reasons for lying (Freeman et al., 1999; Jensen et al., 2002; Levine et al., 2010; Perkins & Turiel, 2007). In the present research, I examined whether students deemed many of their own acts of cheating permissible because of such situation-specific reasons.

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Motivations: Do Other Concerns Conflict With Acting Honestly?

A third possible reason why students cheat is that they decide to prioritize other concerns over integrity in a specific situation, even when they evaluate cheating to be wrong. Students who identify an act as cheating and judge it to be wrong must still choose to act honestly rather than dishonestly in that situation. When acting honestly does not conflict with other goals, as is often the case in daily life, people typically act honestly (Levine et al., 2010). Sometimes, however, strong motivations in favor of cheating can conflict with the choice to be honest. For instance, students may feel like they have no choice but to cheat when faced with a desperate situation, not enough time, and strong pressures to perform (Stephens & Nicholson, 2008). Note, also, that such pressures can influence evaluations (DeBernardi et al., 2021; Jensen et al., 2002). Students do not simply stop caring about integrity in these situations: Their belief that cheating is wrong still provides at least one motivation to avoid cheating. I theorize that when these competing issues arise, students experience conflict, thus requiring more reasons in favor of cheating to outweigh their underlying concerns for integrity. In contrast, when students do not perceive their acts as cheating, they would be unlikely to experience conflict.

Prior work suggests that many cases of cheating happen when students believe they have no option but to cheat in order to meet other goals (Franklyn-Stokes & Newstead, 1995; Park, 2003; Stephens & Nicholson, 2008). Based on this prior work and pilot investigations, I expected that students who decided to cheat would reference competing assignment goals (e.g., learning, obtaining a grade), feasibility

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concerns (e.g., not knowing how to complete assignment), relationship goals (e.g., helping a friend), and moral concerns pertaining to rights, justice, and others' welfare. When these concerns come into conflict with one another, students are forced to compromise at least one principle when they decide how to act. Past research on dishonesty suggests that people think lying is warranted when acting honestly would threaten one's own rights or others' wellbeing (Freeman et al., 1999; Perkins & Turiel, 2007). The present research sought to uncover the concerns that were influential in cases where students decided to cheat.

The Present Research

Figure 1 illustrates the steps a student would go through for one potential cheating act. Each of these steps in the decision-making process can push the student toward, or away from, acts of cheating. If a student does not recognize the act as cheating, evaluates cheating as acceptable, or faces many strong motivations for cheating, they will be more likely to cheat.
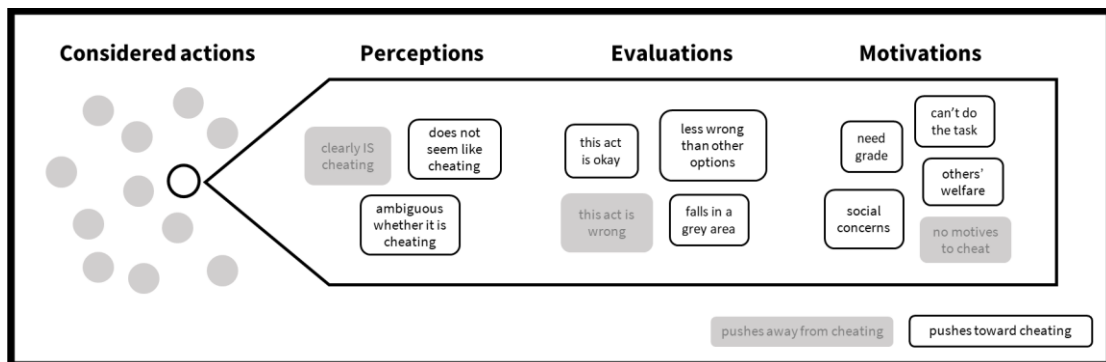
Figure 1. Illustration of three factors and example considerations that could guide a student's decision to cheat on a given considered action.

Specifically, the present research examined the roles of three hypothesized contributors in students' accounts of past acts of cheating: (1) They may fail to perceive their act as cheating; (2) they may think that cheating is acceptable in a particular situation, even though they think cheating is generally wrong; and (3) they may decide to prioritize more compelling concerns over integrity, even though they think cheating is wrong, in that situation. Any one of these factors, or a combination of them, can cause cheating.

The proposed situated decision-making model makes several predictions about why students cheat (Table 1). Yet, very little prior research has systematically examined students' past acts of cheating. The present research addresses this gap by studying students' perceptions, evaluations, and motivations behind their own acts of cheating to test key assumptions of the proposed model.

Table 1
Summary of Three Factors in Students' Decisions to Cheat and Predicted Results

	Decision-making step	Key predictions
Perception	Does this action count as cheating?	Students experience uncertainty about what constitutes cheating; many acts of cheating are unintentional
Evaluation	Would cheating in this situation be acceptable?	Students think cheating is generally wrong (including their own acts), yet acceptable in some situations
Motivation	Do other concerns conflict with acting honestly?	Students will only cheat under exceptional pressures. Deliberate acts of cheating will be accompanied by many reasons in favor of cheating

In two studies, I conducted structured interviews with undergraduates in different majors about hypothetical and actual events involving potential academic

misconduct. Each study assessed participants' perceptions, evaluations, and motivations to advance our knowledge of why students cheat.

Research Setting

Both studies were conducted with classes taught at the University of California, Santa Cruz (UCSC)—a large, public research university in the Western United States. UCSC does not have an honor code (McCabe & Treviño, 1993; McCabe et al., 2002), but it has an academic policy that broadly covers integrity and cheating (http://ue.ucsc.edu/academic-misconduct.html).

CHAPTER 2

Study 1: Interviews About Cheating Among Students in Psychology Classes

In Study 1, I interviewed students in psychology and cognitive science courses about their recent acts of cheating. Participants described a past act of either plagiarism or other cheating. I examined plagiarism separately from other forms of cheating since plagiarism can be particularly difficult for students to perceive (Park, 2003; Roig, 1997, 2001). To see whether the three-factor explanation of why students cheat despite caring about integrity is useful, I also examined whether students generally think cheating is wrong by asking participants to make judgments about hypothetical scenarios involving clear cases of cheating.

Methods

Participants

Sixty-eight undergraduate students (72% women, 26% men, $M_{\text{age}} = 19.65$ years, $SD = 1.48$ years) were recruited through a participant pool in the Psychology Department at UCSC. Subjects were offered course credit for their participation. Individuals needed to be currently enrolled undergraduate students at least 18 years of age to participate in the study. The research was approved by the university's Institutional Review Board. Most participants (90%) were born in the U.S. Fifty-four percent spoke English as their first language, and 43% were first-generation college students.

Materials and Procedure

Data collection took place between January and November 2016. Students

came to a quiet lab space and were interviewed individually by either the first author or a trained research assistant. The structured interview lasted approximately 60 minutes and was audio recorded. To reduce potential effects of social desirability, the interviewer explained that the study was for psychological research and that participant responses would be handled confidentially and not shared with the university administration. Participants were assured that there were no right or wrong answers and that the researchers just wanted to understand their opinions and experiences. Audio recordings were masked, transcribed, and then deleted.

Hypothetical scenarios. To assess students' perceptions and evaluations of others' cheating, I presented participants with a vignette in which a student had submitted an assignment that possibly constituted plagiarism (Waltzer & Dahl, 2020). The participants saw two texts next to each other, one containing the original text and the other containing the hypothetical student's submission. The student submission text was designed to be highly similar to the original text, such that all of the text was identical, except for 20% of the words being replaced by synonyms. Participants learned that the hypothetical student had submitted their text for a graded assignment. Participants were then asked whether the hypothetical character's act counted as cheating, whether it was okay or not okay, and how they would rate the act on an 11-point scale from "Really bad" (0) to "Really good" (10). I excluded eleven participants who had incomplete interviews (final $n = 57$): Two interviews did not have a hypothetical scenario, and nine used text pair stimuli that were later revised.

Personal experiences. The second part of the interview focused on

participants' own experiences with cheating. Participants were randomly assigned to either the *plagiarism* (*n* = 32) or *other cheating* (*n* = 36) condition. They were asked the following: "Can you think of a time you did something that might count as [plagiarism/academic misconduct]? If so, can you tell me about the most recent time it happened?" If needed, the interviewer provided examples of plagiarism or other cheating. Once the participant had identified a recent action that they believed might constitute cheating, the interviewer posed a series of questions about the participant's perceptions, evaluations, and motivations about the event, both at the time of the event and at the time of the interview. Table 2 lists each of these questions. Participants also reported their demographic information at the end of the interview. For additional methodological details, see Appendix A.

Table 2
Prompts and Example Responses in Study 1 Interview

Shorthand	Prompt	Example response
Perceptions		
Cheating then	At the time, did you think [action] was [plagiarism / cheating]?	*Yes, No*
Cheating now	Looking back on it, do you now think [action] was [plagiarism / cheating]?	*Yes, No*
Evaluations		
OK then	At the time, did you think [action] was okay or not okay?	*"I knew that it wasn't right"*
Why OK then	Why did you think it was [okay / not okay] back then?	*"She was relying on me in high school […] It wasn't gonna help her at all when she was alone"*
Rate then	Back then, how would you have rated it on this scale from *really bad* to *really good*?	*Rating scale from 0 = "Really bad" to 10 = "Really good"*
OK now	Looking back on it, do you now think [action] was okay or not okay?	*"yeah what I did was wrong"*
Why OK now	Why do you now think it was [okay / not okay]?	*"not ok, I kind of feel really guilty."*

Rate now	How would you now rate [action] on the scale?	*[Rating from 0 to 10]*
OK no rule	What if [school] had no rules at all against [action]? Would it be okay or not okay?	*Okay, Not okay*
Motivations		
Why did it	Why did you do [action]?	*"It's my friend, and he was pretty confused. So I was helping him"*

Data Coding

Two coders independently classified participants' open-ended responses based on established coding schemes, described below (see also Waltzer & Dahl, 2020). Reliability was assessed by computing Cohen's kappa scores (κ) for both coders' categorizations of a random subset (20%) of responses (McHugh, 2012).

Classification of act as cheating. Described acts were categorized as either *clearly cheating* (cases that unambiguously violate academic rules in graded coursework), *presumably cheating* (cases that are considered violations by some, but not all, instructors, or cases involving ambiguity in what was allowed), or *not cheating* (no conceivable violation, including when the instructor explicitly permitted the action). Agreement was high, $\kappa = .96$.

Uncertainty. All statements were coded for spontaneous expressions of uncertainty about whether something counted as cheating (e.g., "I don't think it's full-blown plagiarism, it could be verging") or whether it was wrong (e.g., "I knew that it wasn't right, but I didn't think that it was immoral"). Agreement was high, mean $\kappa = .93$ (range: .77 – 1.00).

Evaluative judgments. All statements were classified as either containing a

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judgment (*codeable*) or not (*not codeable*). If the statement was codeable, it was

assigned a judgment of 1 (*okay*), 0 (*not okay*), or N (*any other judgments*, e.g.

"neither," "sometimes"). Agreement was high, mean $\kappa = .97$ (range: .94 – 1.00).

    Reasons. Participants' justifications for their evaluative judgments and their

motivations for doing what they did were coded into the following categories:

academic labeling, feasibility, assignment goals, relationship goals, evaluative

labeling, rights and respect, others' welfare, and *other* (Table 3). Agreement was

high, mean $\kappa = .94$ (range: .80 – 1.00).

Table 3
Definitions and Examples of Categories Applied to Reasoning in Open-Ended
Responses

Reason category	Description	Example quotes
Academic labeling	Describing rules or authority expectations, how typical the act is, or whether the act constitutes cheating	*"I knew it was against the rules"* *"No one ever asks you to cite it"* *"It's cheating"*
Feasibility	Considerations about how hard it is to do the task without cheating, e.g. difficulty of the assignment, not enough time, lacking resources	*"It definitely was difficult because I was sick"* *"There was just not enough time"* *"I was under a lot of stress and pressure"*
Assignment goals	Self-interested, school-related outcomes, e.g. concerns about learning, obtaining a grade, or being punished	*"At the end of the day I was still learning the concepts"* *"I was just so scared of not passing that class"* *"I just felt that I needed to finish the assignment and turn it in"*
Relationship goals	Concerns about getting along with others, including trust, reputation, and others' evaluations of the participant	*"They would judge you differently. They would think 'oh you're so selfish' and stuff like that"*

Evaluative labeling	Evaluations of the act without elaboration, e.g. saying the act is (not) morally wrong, feeling guilty	*"I just thought I'm just doing what I think is right"* *"I kind of feel really guilty"*
Rights and respect	Concerns about honesty, fairness, property rights, and consent	*"Being truthful about what I know"* *"You can't just steal someone's work without giving them credit"*
Others' welfare	Concerns about others' needs or consequences to other people's wellbeing	*"I figured helping her made her chances better"*
Other	General statements about external concerns or the student's intentions	*"That was the same week I found out that my friend passed away"* *"I didn't think too much"* *"I didn't have malicious intent"*

Analysis

For the purposes of analyses, I treated evaluative judgments as dichotomous: Whether participants had judged their action to be *wrong* (e.g., "not okay") or *not wrong* (e.g., "okay," or refusing to commit to a judgment by saying "both," "neither," etc.).

Data were analyzed using generalized linear models (GLMs) and, for repeated-measures analyses, generalized linear mixed models with random intercepts for participants (GLMMs, Hox, 2010). For analyses using dichotomous dependent variables (perception of whether the act constituted cheating, evaluative judgment as wrong or not, presence of justifications), models used logistic link functions and binomial error distributions. For analyses of evaluative ratings, models used identity link functions and normal error distributions. Hypotheses were tested using likelihood ratio tests and Fisher's exact tests. Preliminary analyses revealed no significant

effects of demographic predictors (age, gender, first-generation status, international status, English as first language), hence these predictors were not included in the models on which I report below (see Appendix A).

Results

Below, I report findings first from the hypothetical events and then personal events, in the order listed in my theoretical approach: perceptions, evaluations, and competing motivations. Further results are reported in Appendix A (e.g., analyses with demographics, wordcounts of statements, and responses to the "OK no rule" question).

Hypothetical Scenarios: Did Students Think Cheating is Wrong?

To validate my contention that participants would generally think cheating is wrong, I first examined their responses to the hypothetical scenarios involving students copying highly similar texts for academic assignments ($n = 57$). As expected, nearly all of these highly similar cases were perceived as *cheating* (89%). Of the hypothetical scenarios judged to be cheating, 100% were judged to be *wrong* (vs. 33% in the 6 cases perceived as not cheating), Fisher's exact test $p < .001$. They also rated the scenarios perceived as cheating more negatively ($M_{rate} = 1.63$) than the ones perceived as *not cheating* ($M_{rate} = 5.30$), $F(1,55) = 35.44$, $p < .001$.

Nature of Described Personal Events

In the interviews about their own experiences, nearly all participants (97%) described acts that could count as cheating under school policy (*clearly cheating:* 75%; *presumably cheating:* 22%). Only 3% of participants described events that

could not conceivably constitute cheating (e.g., using unusually advanced vocabulary in writing an essay). Data for the non-cheating events were removed from further analyses.

Given the dearth of knowledge on specific cases of student cheating, I thought it necessary to first document details of the cases described in the interviews. Participants described events that were somewhat recent, with most actions (61%) occurring within a year of the interview (M_{time} = 595.60 days, SD = 649.44). Most participants described events that took place in either humanities (30%, e.g., history, literature), social sciences (29%, e.g., psychology), or engineering/math (17%, e.g., statistics) courses. Less common were courses in general education (11%, e.g., writing course required for all first-year students), physical and biological sciences (9%), and arts (5%).

Most *plagiarism* acts involved copying ideas (34%), partially copying a few sentences or less (26%), or copying most or all of a work as-is (20%). Some acts (10%) involved self-plagiarism. Most of the *plagiarism* acts involved using words, ideas, or images from websites, articles or books without citing the source (77%). Most *other cheating* acts involved accessing an illicit source (66%, e.g., using notes in a closed-notes assessment) or illicit collaboration (26%). Common sources of information used in *other cheating* acts included the participant (46%, e.g., using crib notes, giving someone else answers, lying to teacher), peers (23%), and group efforts (20%). Whereas the beneficiary of *plagiarism* acts was always the participant (100%), the beneficiary of *other cheating* acts was mostly the participant (57%),

followed by peers (31%) and groups (14%).

Perceptions: Did Students Fail to Recognize Their Cheating at the Time?

Most participants (52%) reported they did not believe they were cheating at the time of the event. Participants were far less likely to have believed that their actions constituted misconduct in the *plagiarism* condition (17%) than in the *other cheating* condition (76%), $D(1) = 24.53$, $p < .001$. Some participants (5%) spontaneously expressed that they had uncertainty about whether their actions constituted cheating at the time of the event; this did not differ between *plagiarism* and *other cheating* ($p = .480$).

Evaluations: Did Students Think Their Actions Were Acceptable at the Time?

About half of participants (44%) thought their actions were *wrong* at the time of the event. On average, they rated their actions near the midpoint of the 11-point scale ($M_{rate} = 5.25$). Students' perceptions predicted their evaluations at the time of the event. Those who did not think their actions constituted cheating were less likely to say their actions were wrong (21%) compared to those who did think they were cheating (65%), $D(1) = 12.72$, $p < .001$. Similarly, they rated their actions more positively ($M_{rate} = 6.24$) than those who thought they were cheating ($M_{rate} = 4.11$), $F(1,60) = 10.66$, $p = .002$. Features of the event also predicted evaluations: Participants were less likely to say *plagiarism* acts were wrong (19%) compared to *other cheating* acts (66%), $D(1) = 9.45$, $p = .002$, and participants were less likely to say their actions were wrong if they were *not a beneficiary* of the act (36%, e.g., they were helping a friend) than if they *were a beneficiary* (45%), $D(1) = 7.30$, $p = .007$.
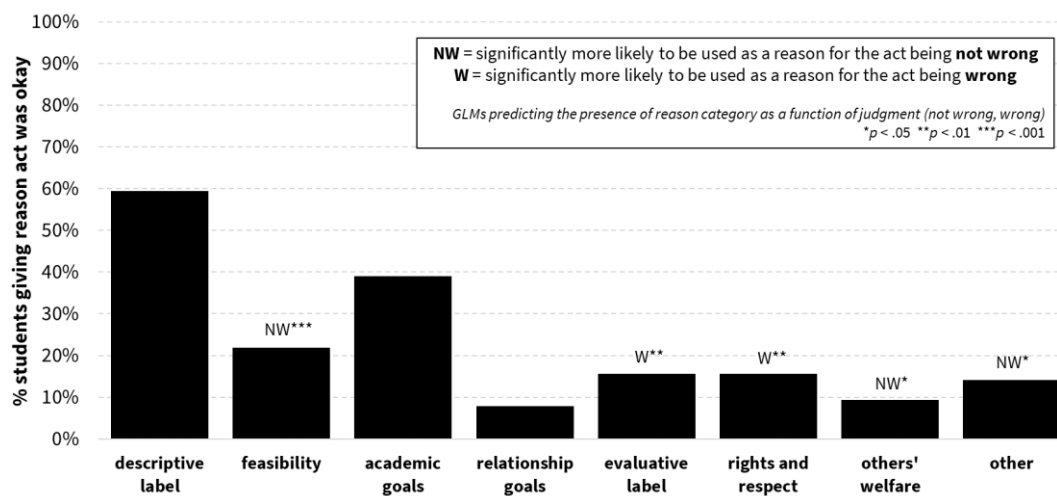
Figure 2. Percent of students in Study 1 who gave each type of reason for why they thought their actions were not wrong at the time.

I wanted to know the reasons students had in favor of a positive evaluation of their own actions, regardless of their final judgment (wrong or not wrong). Most participants (59%) gave *academic labeling* as a reason in favor of their actions (e.g., it was not cheating, not against the rules, it was a small assignment). As expected, most of those participants (82%) provided additional types of concerns. Common reasons participants gave in favor of their actions included *assignment goals* (39%, e.g., "I saw it as a way to improve my paper") and *feasibility* (22%, e.g., "I was just so stressed"), followed by *evaluative labeling* (16%), *rights and respect* (16%), and *other* reasons (14%). Looking at individual statements, *feasibility, others' welfare,* and *other* were more likely to be used as reasons for why the act was *not wrong,* Ds(1) > 5.08, ps < .025, whereas *evaluative labeling* and *rights and respect* were more likely to be used as reasons for why the act was *wrong,* Ds(1) > 8.58, ps < .004.

Figure 2 summarizes the common overall reasons and differences by individual statements.

Evaluations at the Time of the Interview. It is commonly assumed that students will seek to condone or excuse their previous cheating to avoid feeling guilty. However, students' evaluations of their acts at the time of the interview lent no support to this explanation. At the time of the interview, students were *more* likely to say their actions were wrong (71% vs. 44%) and rated their actions more negatively ($M_{\text{rate}} = 3.61$ vs. 5.25) compared to their reported evaluations at the time of the event, Ds$(1) > 15.43$, ps $< .001$.
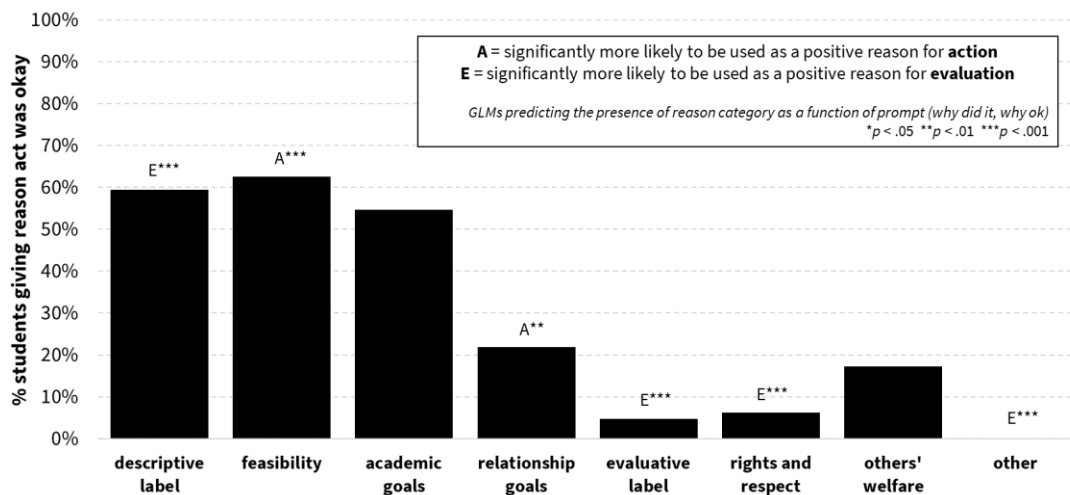

Figure 3. Percent of students in Study 1 who gave each type of reason for why they did the action.

Motivations: Did Students' Concerns Conflict With Acting Honestly?

Participants expressed several distinct motivations for why they engaged in the act (in response to the prompt, "why did you do what you did?"). The most

common reason for their actions was *feasibility* (63% of participants), followed by *academic labeling* (59%) and *assignment goals* (55%, Figure 3). Some participants also mentioned *relationship goals* (22%) and *others' welfare* (17%). I also wanted to identify which types of reasons might be especially relevant to the motivation step of decision-making, which could push a student into cheating even when they think it is wrong. When looking at the statements individually, *feasibility* and *relationship goals* were more likely to be raised as motivations for the action ("why did you do it?") rather than justifications for a positive evaluation of the action ("why was it okay?"), $Ds(1) > 9.27$, $ps < .003$.

All participants (100%) described motivations for their actions (in response to the prompt, "why did you do what you did?"), with an average of 10.19 statements ($SD = 7.63$). Suggesting that extra pressures were needed to overcome an aversion to cheating, participants who *believed they were cheating* at the time provided more motivations for their actions ($M_{statements} = 12.27$, $SD = 9.15$) than those who *did not think they were cheating* ($M_{statements} = 8.56$, $SD = 5.56$), $D(1) = 20.55$, $p < .001$.

Discussion

The findings from Study 1 yielded several insights about the perceptions, evaluations, and decisions that underlie students' acts of cheating. Nearly all students (97%) described recent experiences with cheating, typically within the prior two years. First, in line with my model, situational *perceptions* seemed to play a key role in student cheating. About half of participants reported later that they did not recognize their acts as cheating at the time of the event. Plagiarism events appeared to

be more difficult to recognize (only 17% perceived as cheating) compared to other acts of cheating (76%). This suggests that a failure to *perceive* cheating could account for a substantial proportion of cheating acts.

Evaluations of cheating also played a major role. As expected, most—though not all—participants who did not think they were cheating evaluated their actions as acceptable. However, even among participants who reported that they knew they were cheating at the time, about a third did not think their actions were wrong. Positive evaluations were particularly common when the cheating was not for the participants' own personal gain (e.g., helping a friend). Common reasons students gave for why their actions were alright included *assignment goals* (e.g., needing a grade, learning), *feasibility* (e.g., difficulty of the assignment), and *academic labeling* (e.g., the act is typical or permitted by rules). Reflecting the struggle between their concerns for integrity and their actions, students expressed conflict about their evaluations. Most participants made statements against their actions and spontaneously expressed uncertainty about whether what they were doing was alright. While some students found cheating acceptable in the specific personal events they described, they still generally disapproved of cheating. Students almost never judged straightforward hypothetical acts of plagiarism to be acceptable. And in the personal events, students evaluated their own acts more negatively in retrospect, suggesting participants did not merely absolve themselves of guilt by neutralizing their actions (Sykes & Matza, 1957).

Feasibility and *assignment goals* were also common *motivations* for acting,

along with *relationship goals* (e.g., getting along with peers) and *others' welfare*

(e.g., helping a friend pass a class). Students did not appear to take their decisions to

cheat lightly. As expected, deliberate cheating was accompanied by many reasons.

Participants who recognized their acts as cheating had more reasons for their actions

($M = 12.27$ statements) than those who did not ($M = 8.56$), suggesting that students

need strong motivations to overcome their concern against cheating.

To validate and extend the findings from Study 1, I next sought to replicate

the work in a second study. The second study was designed after I completed coding

and preliminary analyses for Study 1, giving me time to assess its methodology and

implications. For Study 2, I focused on engineering students. A review of prior

research as well as internal discussions and analyses at the university involved in this

study suggested that the field of engineering would be valuable to study specifically.

Rates of cheating tend to be higher among engineering students (Harding et al., 2007;

McCabe, 1997), and as an emerging field engineering involves a lot of new types of

tasks for which expectations of what is allowed may be rapidly developing (e.g.,

debugging, using StackOverflow, real-world programming often involves working

together).

CHAPTER 3

Study 2: Interviews About Cheating Among Students in Engineering Classes

In Study 2, I recruited students from large introductory-level engineering classes. In Study 1, described events were distributed across many disciplines and some occurred as long ago as nine years prior to the interview. In contrast, the interview protocol in Study 2 was refined to home in on events that had occurred in the class from which the student had been recruited. Similar to Study 1, the interview focused on students' perceptions, evaluations, and competing motivations in their most recent experiences with cheating.

Methods

Participants

Undergraduate students ($N = 123$, 20% women, 74% men, $M_{\text{age}} = 19.58$ years, $SD = 2.00$ years) were recruited from five large, introductory engineering courses at UCSC. Participants were offered $10 gift cards and course credit for their participation. As in Study 1, all participants were enrolled undergraduates at least 18 years of age. Most participants were born in the U.S. (79%) and spoke English as their first language (72%), and 30% were first-generation college students.

Materials and Procedure

Data collection took place between October and December 2018. The engineering division did not have an established system for recruiting students for research. For this reason, I used gift cards as additional incentives (mentioned in *Participants*) and implemented a two-stage method to broadly gather responses via

surveys. Participants first completed a brief online survey and then came in to the lab for a 30-minute, audio-recorded interview.

Online survey. As part of a larger study, students in the university's five largest lower-division engineering courses ($M_{enrollment} = 290.40$) were sent a Qualtrics survey via class announcements. In the survey, participants were shown a hypothetical scenario involving prototypical cheating: "Imagine that a student had someone else write part of a program for them, and then turned it in as an assignment." They indicated whether they thought the act counted as cheating, judged whether it was okay or not, and rated it on a scale from 0 ("Really bad") to 10 ("Really good"). They also reported their demographic information (e.g., age, gender, first-generation status). At the end of the online survey, participants were invited to participate in a follow-up interview in person. The data reported here focus on the $N = 123$ students who signed up for and completed the interview (16% of survey respondents).

In-person interview. The interview took place in a private lab space and was audio recorded and then transcribed. Interviews were conducted individually by either the first author or a trained research assistant. Participants were asked to think of the most recent time they did something in their class that could count as academic misconduct under school policy. Since Study 2 focused on cheating events specifically in engineering, the interviewer sought to sample events that students did not think were permitted by their instructors in engineering classes. If the event was not a clear example of cheating (e.g., looking up answers in the class textbook), the

interviewer asked the participant to think of an earlier action that could more clearly

count according to the policy. Participants who could not think of an action were

given a list of concrete examples of potential cheating acts in engineering (see

Appendix B). Then, once a target event was identified, the interviewer administered a

structured interview, using prompts similar to those in Study 1 about students'

perceptions, evaluations, and decisions (see Table 4).

Table 4
Prompts and Example Responses in Study 2 Interview

Shorthand	Prompt	Example response
Perceptions		
Cheating then	At the time, did you think what you were doing counted as cheating?	*Yes, No*
Confusion	Did you experience any confusion or uncertainty about whether your actions were allowed?	*Yes, No*
Evaluations		
OK then	At the time, did you think what you were doing was okay or not okay?	*"It felt, yeah it felt OK"*
Why OK then	Why did you think it was [okay / not okay] back then?	*"Just because I don't think it was cheating by my standards."*
Rate then	Back then, how would you have rated it on this scale from *really bad* to *really good*?	*Rating scale from 0 = "Really bad" to 10 = "Really good"*
OK now	Looking back on it, do you now think what you did was okay or not okay?	*"I still believe it's OK"*
Why OK now	Why do you now think it was [okay / not okay]?	*"Because again, I wasn't copying from anybody. I wasn't putting anyone at risk"*
Rate now	Now, how would you rate your actions on the scale?	*[Rating from 0 to 10]*
OK no rule	What if your actions were not in violation of any rules? Would what you did be OK or not OK in that case?	*Okay, Not okay*
Motivations		
Why did it	Why did you do what you did?	*"I just got really frustrated because I spent 4+ hours on trying to fix that issue"*

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Data Coding and Analysis

Data coding and analyses were the same as in Study 1. The reliability scores for coding schemes were as follows: *Classifying act as cheating* ($\kappa = .86$), *Uncertainty* (mean $\kappa = .91$, range: .90 - .92), *Judgments* (mean $\kappa = .92$, range: .86 - .98), and *Reasons* justifying evaluations and motivating actions (mean $\kappa = .94$, range: .91- .96). Again, since preliminary analyses revealed no significant effects of demographic predictors (age, gender, English as a first language, first-generation status, international status), these variables were thus excluded from the models reported below (see Appendix B for additional analyses).

Results

Hypothetical Scenarios: Did Students Think Cheating is Wrong?

Similar to Study 1, nearly all of the prototypical cheating scenarios were perceived as *cheating* (92%). Of the hypothetical scenarios judged to be cheating, nearly all (95%) were judged to be *wrong* (vs. 10% of the 10 cases perceived as not cheating), Fisher's exact test $p < .001$. Participants also rated the scenarios they perceived as *cheating* more negatively ($M_{rate} = 1.77$) than the ones perceived as *not cheating* ($M_{rate} = 5.06$), $F(1,115) = 38.29$, $p < .001$.

Nature of Described Personal Events

Most participants (87%, $N = 106$) described acts that could count as cheating under school policy (*clearly cheating:* 46%; *presumably cheating:* 41%). Some participants (12%) described events that were classified as *not cheating,* and just two participants (2%) were unable to recall or describe any event at all. Data for the 17

non-cheating events were removed from further analyses.

Since so little is known about specific cases of cheating—especially in engineering—I first documented the details of the described acts, like I did in Study 1. In line with the revised interview protocol's focus on capturing events from a current engineering class, nearly all of the described acts were from within a year of the interview (96%, $M_{time} = 78.72$ days, $SD = 178.65$) and occurred in an engineering class (94%).

The majority of the described events were classified as *plagiarism* ($n = 63$, 59%), though many were also classified as *other cheating* ($n = 43$, 41%). As in Study 1, the beneficiary of *plagiarism* acts was always the participant and the most common source for such acts involved using words, ideas, or images from websites, articles or books without citation (56%); other common sources included copying from a peer or group (33%) and copying from a class-based resource (e.g., teacher, textbook), one's own past work, or other resource (11%). For *other cheating* acts, the beneficiaries were approximately evenly distributed between the participant (31%), peers (33%), and groups (36%). Similar to Study 1, common sources for cheating acts were the participant (48%), peers (24%), and groups (24%).

The actions were further classified into several engineering-specific types of categories. Among the acts that were in engineering classes, 24% involved *copying and pasting text or code from an external resource* (e.g., peer, StackOverflow), 23% involved *copying ideas from an external resource*, 11% involved *assisting a peer by debugging* their code, 10% involved *assisting a peer by providing ideas*, 9% involved

collaboration with a group, and 7% involved *assisting a peer by directly writing or*

providing answers for them. Both engineering ($n = 100$) and non-engineering ($n = 6$)

acts are included in all subsequent results.

Perceptions: Did Students Fail to Recognize Their Cheating at the Time?

Most participants (79%) reported that they did not believe they were cheating

at the time of the event. For example, when asked whether they believed their actions

constituted cheating, one participant said, "It could be seen as that, but I [didn't] think

so." Most participants (64%) spontaneously expressed that they had been uncertain at

the time about whether they were cheating. Furthermore, 31% answered *yes* to the

question, "Did you experience any confusion or uncertainty about whether your

actions were allowed?". Participants' *perceptions* of cheating, spontaneous

uncertainty, and acknowledgments of *confusion* did not differ between *plagiarism*

and *other cheating* acts, Ds$(1) < 2.12$, ps $> .146$.

Evaluations: Did Students Think Their Actions Were Acceptable at the Time?

Only 5% of participants thought their actions were wrong at the time of the

event, and average ratings on the 11-point scale were positive ($M_{\text{rate}} = 6.87$). When

participants perceived their act as cheating, they were more likely to judge their acts

as wrong (18%) and rate them negatively ($M_{\text{rate}} = 5.35$) than when they did not

perceive their act as cheating (1%, $M_{\text{rate}} = 7.25$), Ds$(1) > 8.59$, ps $< .004$.

Most participants mentioned *academic labeling* (82% of participants) when

reasoning why their actions were okay at the time (e.g., "I know that other people are

doing it," "It's not like I'm asking him to write my entire code"). Still, most of them

(90%) also gave additional reasons. Common reasons participants gave for why their actions were okay at the time included *assignment goals* (72%) and *feasibility* (46%), followed by *others' welfare* (23%), *evaluative labeling* (22%), *rights and respect* (19%), and *other* reasons (28%). Looking at individual statements, *assignment goals, feasibility, relationship goals,* and *other* were more likely to be used as reasons for why the act was *not wrong, D*s(1) > 5.74, *p*s < .017, whereas *rights and respect* was more likely to be used as a reason for why the act was *wrong, D*(1) = 35.08, *p* < .001. Figure 4 summarizes common overall reasons and differences by individual statements.
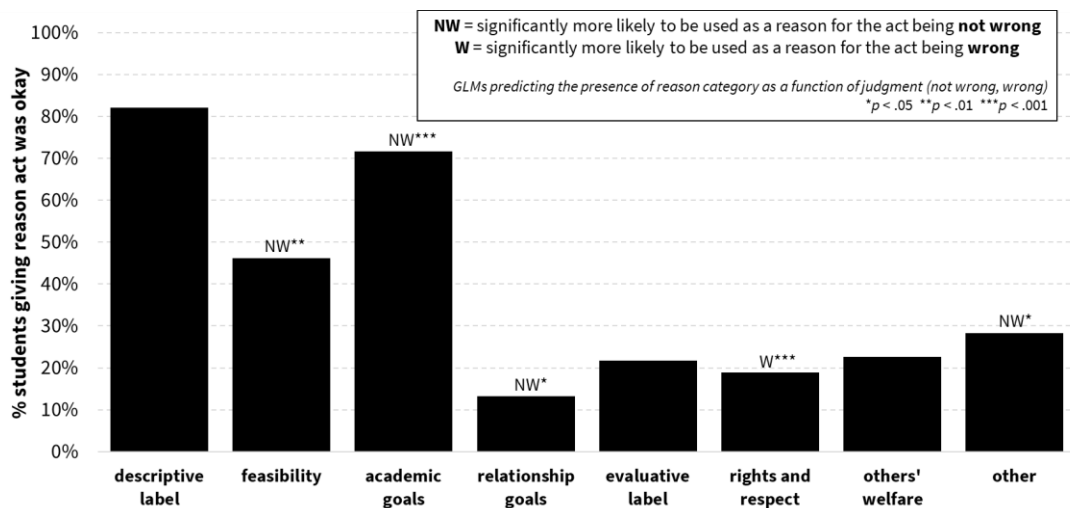

Figure 4. Percent of students in Study 2 who gave each type of reason for why they thought their actions were not wrong at the time.

Similar to Study 1, participants showed conflict in their evaluations. Most participants spontaneously indicated they had experienced *uncertainty* at the time about whether their actions were wrong (75%). And even though most participants

concluded their actions were not wrong, many still gave at least one reason *against* their actions (39%, $M_{\text{statements}} = 1.07$, $SD = 2.30$).

Evaluations at the Time of the Interview. Though participants' evaluations of their actions were overall quite positive, they nevertheless shifted in the negative direction with hindsight. At the time of the interview, students were more likely to say their actions were wrong (15% vs. 5%) and rated their actions more negatively ($M_{\text{rate}} = 6.29$ vs. 6.87) compared to their reported evaluations at the time of the event, Ds(1) > 12.10, ps < .001.

Motivations: Did Students' Concerns Conflict With Acting Honestly?

The most common motivations participants gave for their actions were *feasibility* (89%), *assignment goals* (73%), and *academic labeling* (61%, e.g., everyone else is doing it, the rules are unclear). Similar to Study 1, *feasibility* and *relationship goals* were especially likely to be raised as motivations for the action ("why did you do it?") rather than justifications for an evaluation ("why was it okay?"), Ds(1) > 8.62, ps < .004. See Figure 5 for a summary.

Like in Study 1, all participants (100%) gave motivations for their actions ("why did you do what you did?"), with an average of 13.20 statements ($SD = 7.28$). Unlike Study 1, there was no significant difference between the number of motivations provided by those who thought they were cheating and those who did not think they were cheating at the time, $D(1) = 2.38$, $p = .123$. Still, I note that the mean difference trended in the same direction as in Study 1, as participants who *believed they were cheating* at the time provided somewhat more motivations for their actions

$M_{statements}$ = 14.27, SD = 7.18) than those who *did not think they were cheating*

($M_{statements}$ = 12.92, SD = 7.32).
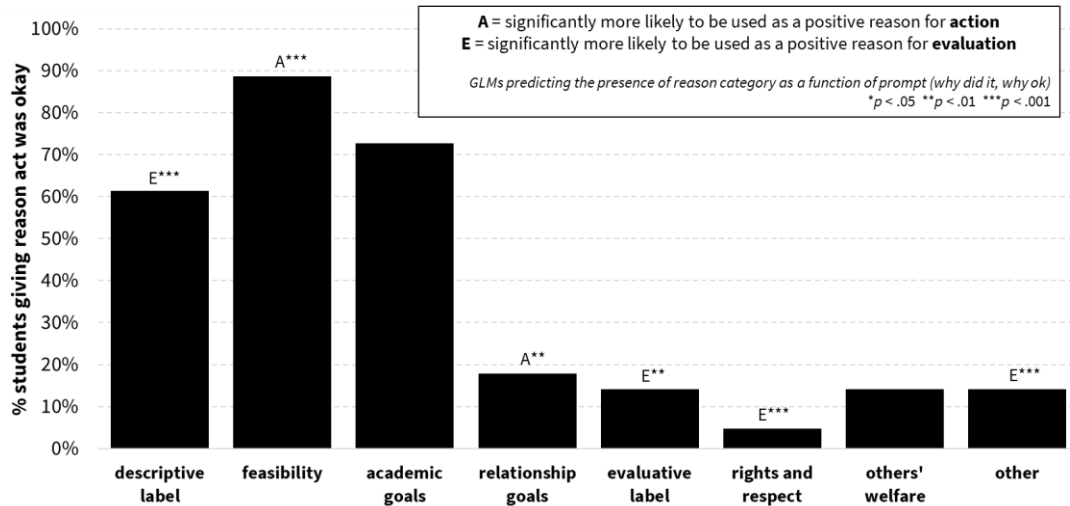
Figure 5. Percent of students who gave each type of reason for why they did the action.

Discussion

Like Study 1, Study 2 supported the proposed model for situated perceptions, evaluations, and decisions about cheating. Nearly all participants recognized prototypical cheating in the hypothetical scenarios and they overwhelmingly judged the cheating as wrong (95%). Most participants reported that they did not perceive their own acts as cheating at the time of the act, and they tended to evaluate their actions more positively if they did not think they were cheating. Common reasons in favor of their actions were again *academic labeling* (e.g., "It's not obvious that's cheating to most students," "Because of the rules in the class"), *assignment goals* (e.g., "So I actually did learn a lot," "You still need to get a grade out of it"), and

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feasibility concerns (e.g., "Time constraints," "I was a little bit desperate"). And again, *feasibility* and *relationship goals* were especially likely to come up as motivations for cheating rather than justifications for evaluations. One possible explanation for these distinctions between reasons is that some concerns (e.g., about the inherent wrongness of an act) weigh more heavily in evaluations whereas other concerns (e.g., about external pressures) can push students to cheat even if they think it is wrong.

One major difference from Study 1 was that, at the time of the reported event, very few participants had believed they were cheating (21%, vs. 48% in Study 1) and even fewer judged their actions as wrong (5%, vs. 44% in Study 1). This unequal distribution in judgments may account for the failure to replicate the finding that students expressed more motivations in favor of their actions when they believed their actions constituted cheating (from Study 1). The difference may have resulted from my attempt to assess recent events in classes from a specific discipline. Because participants were asked to recall events from their current classes, they may have retrieved less clear-cut or severe cheating events than participants in Study 1, who could retrieve cheating events from their entire educational history. Indeed, participants in Study 2 were more likely than those in Study 1 to express uncertainty about whether their acts constituted cheating. These findings further illustrate the prevalence of ambiguity in students' encounters with cheating and integrity in their everyday lives.

CHAPTER 4

Discussion and Conclusion

Understanding why students cheat is crucial for explaining the apparent gap between students' moral judgments and actions and ultimately promoting integrity in schools (Bertram Gallant, 2008; Miller et al., 2011; Rettinger & Kramer, 2009; Stephens, 2018). Despite the intrigue and importance of this topic, systematic studies of students' decisions in actual cheating cases have remained scarce in the literature. Building on recent theoretical and empirical advances in moral psychology, the present research tested three factors that could contribute to students' decisions to cheat: *perceptions, evaluations,* and competing *motivations.*

Students' *perceptions* of whether an action constitutes cheating are integral to any decision to cheat. Across both studies, half or more of the described cheating events could be attributed at least in part to this step. In many cases, students did not think they were cheating at the time. Many, especially in Study 2, also expressed uncertainty about whether their acts constituted cheating. While it is conceivable that some students falsely feigned ignorance about cheating in order to present themselves more favorably, I do not think that this can account for all, or even most, of the cases of unintentional cheating documented herein. If students merely wanted to present themselves in a positive light, they could have denied cheating in the first place; instead, nearly all participants readily described past acts of cheating. Nevertheless, retrospective accounts can be susceptible to biases. Thus, further research needs to corroborate these findings with convergent methods (e.g., perceptions of hypothetical

events, third-person judgments). Supporting this, it seems likely that students often do experience uncertainty about whether their acts constitute cheating, since students and teachers often disagree about whether hypothetical acts constitute cheating (Roig, 1997, 2001; Waltzer & Dahl, 2021).

Perceptions have been overlooked in many studies of academic cheating. These studies have often relied on the assumption that participants know what researchers mean by "cheating" and they have sometimes restricted their definitions of cheating to only include intentional acts (Ashworth et al., 1997; Barnhardt, 2016; McCabe & Treviño, 1993). The present findings suggest that at least some of students' acts of cheating may derive from misperceptions about what counts as cheating.

Students' *evaluations* of whether a specific cheating act is wrong also guide their decisions. A general concern that cheating is wrong provides at least one motivation for students to avoid cheating (Davis et al., 1992; Miller at al., 2011; Stephens, 2018). As expected, nearly all of my participants recognized clear-cut hypothetical cheating acts and judged them to be wrong. Still, students sometimes judged that it is acceptable to cheat in specific circumstances, for instance because of concerns for *assignment goals, feasibility, others' welfare,* and *relationship goals.* Most students also experienced conflict about whether their actions were alright, suggesting that they remained engaged with their concerns for integrity. And, far from morally disengaging, students evaluated their actions *more* negatively in retrospect. These findings run counter to assumptions that students neutralize their

values or simply do not take them into account in their decisions about cheating (e.g., "Morality does not seem to be a major influence on student decisions to cheat or not to cheat," p. 444, McCabe, 1997; see also Haines et al., 1986).

Though they care about integrity, students still must balance competing *motivations* in some cases, which can lead to them deciding to cheat in favor of other concerns. *Feasibility* (e.g., not enough time, difficulty of task) and *assignment goals* (e.g., learning, grades) were especially common motivations for cheating (Rettinger et al., 2004; Stephens & Nicholson, 2008). In Study 1, students who thought they were cheating tended to have more reasons motivating their acts, suggesting that enough competing motivations can push students to cheat when they otherwise might not have done so. The findings align with the notion that many real-life ethical decisions, like those involving academic integrity, are complex and involve multiple concerns that sometimes come into conflict with one another (Turiel & Dahl, 2019).

Though there were many similarities between Study 1 (with social science students) and Study 2 (with engineering students), a few notable differences emerged. For instance, unlike in Study 1, very few participants in Study 2 thought what they did was wrong, and their evaluations did not differ across *plagiarism* and *other cheating* acts. This highlights how experiences around cheating can be specific to a particular major, even within the same institution (Borg, 2009; Harding et al., 2007; McCabe, 1997; Newstead et al., 1996). Such context-specific differences can be explored further in future research.

Overall, the present findings supported a novel framework of academic

cheating and integrity centered on situated perceptions, evaluations, and decisions. As I discussed in the Introduction, this framework differs from prior theoretical approaches to academic integrity—in particular, those centered on students' neutralization or disengagement of moral values or those that use stable characteristics of individuals and institutions to predict cheating (e.g., Haines et al., 1986; McCabe et al., 2012). The present findings were consistent with the assertion that genuine moral evaluations play a role in decisions about whether to cheat, unlike what neutralization accounts would predict, and that decisions about cheating incorporate situational features in ways that could not be predicted by factors that are stable across situations. Of course, further research is needed to examine additional predictions of these alternative approaches. The following section suggests some such lines of future inquiry.

Limitations and Future Directions

This research focused on students' self-reported, retrospective experiences. This method had the advantage of gaining ready access to students' everyday experiences with cheating, and it thus provides an important starting point for any effort to understand why students cheat. Still, the self-reports are limited by their reliance on imperfect recollections. Thus, the findings obtained and the hypotheses generated with the current method should be tested with other methods. For instance, the interviews revealed students' experiences of conflict and their common reasons for and against cheating. Future research can use naturalistic observations, behavioral experiments, and teacher reports to complement the findings presented here in

advancing our understanding of why students cheat (Dahl, 2017; Waltzer & Dahl, in press).

The participants in the present research mostly majored in two disciplines (social sciences and engineering) from just one university in the U.S. Given that students' experiences with cheating can vary considerably across disciplines, schools, and cultural contexts, one valuable future direction would be to broaden the research to include more majors and institutions in different regions (Martin et al., 2011; McCabe et al., 2008). A larger, more diverse sample would also yield higher statistical power for detecting interindividual differences, for instance as a function of whether a student's first language was English (Borg, 2009; Park, 2003; Shi, 2004).

The present research focused on students' acts of cheating, and excluded decisions to refrain from cheating. An account of cheating remains incomplete without a study of when students refrain from cheating, especially since students appear to refrain from cheating more often than they decide to cheat (Ottaway et al., 2017; Rundle et al., 2020; Waltzer et al., 2019). To fully test the proposed framework of how perceptions, evaluations, and competing motivations guide students' decisions to cheat, data on students' decisions to violate *and* uphold integrity will both be essential. The findings from this study provided initial support for the proposed framework, as well as crucial descriptive insights about what matters most for each decision-making factor. Future work can build on these findings and systematically test the model by examining decisions to *refrain from cheating* in comparison with decisions to *cheat* (Harding et al., 2007; Rettinger, 2007).

Conclusion

Three psychological factors discussed in this paper offer insights into moral decision-making in everyday contexts and actionable points for educational intervention. (1) Students may cheat when they *perceive* that a particular act does not count as cheating. To remedy this, educators can clearly communicate what constitutes cheating and integrity in their classes. (2) Students may cheat when they *evaluate* a particular act of cheating to be acceptable. To address this, educators can examine the reasons students think cheating is sometimes alright (e.g., learning goals, perceived shortcomings of the assignment) and revise coursework to align more closely with those values. (3) Students may cheat, even when they deem it wrong, because they prioritize competing *motivations* to cheat in a particular situation. Educators can help students navigate these difficult situations by providing resources for making decisions under stress.

At first glance, the facts of academic cheating may seem dismal: Nearly all students cheat at least once in their academic careers, though only a small fraction of such cases are ever detected or reported. The present research supports a more encouraging take on student cheating, according to which students genuinely care about academic integrity, and this concern is still at work even when students decide to cheat. The research lays a foundation for several promising avenues of research and practice by offering a new understanding of students' situated decisions about cheating.

Appendix A: Supplementary Materials for Study 1

This Appendix contains additional details about the methods and results from Study 1. Further documentation and raw data are available on the Open Science Framework (OSF) at https://osf.io/85vsq/.

Method
Materials and Procedure

In the research posting that was advertised online, and at the beginning of the interview, the research was presented as being about academic experiences. The interviewer said:

> *This interview will be about your opinions about and experiences with academic situations. It will take about one hour. Everything we discuss will be kept confidential and nothing you say in this interview will be linked back to you. The interview will be audio recorded. The audios will only be used for transcribing and data analysis purposes, and findings will be reported as group averages.*

Then, before presenting the hypothetical scenario, the interviewer said:

> *This interview will have two parts. In the first part, I will tell you stories about hypothetical characters and ask you to evaluate their actions. In the second part, I will ask you about your own experiences and ask you to evaluate those.*

By the time the personal event portion of the interview began, many students likely had realized the interview was about academic cheating, since they were asked whether the texts constituted plagiarism. They also may have learned about the nature of the study from conversations with peers who had previously participated, given that the study took place over eleven months from January to November 2016.

In the interview, when participants were asked to explain why they thought the action was okay or not, the interviewer provided further prompts for clarification. For instance, if the response could be coded as multiple reasons, or the reason was not clear, the interviewer asked what they meant by that, or "why does that make [action] okay/not okay?" In many cases, when participants said hypothetical actions were wrong, the first thing they did was indicate that the action constituted cheating. When participants provided reasons that involved academic or evaluative labeling (e.g., saying it is cheating, or just wrong), the interviewer always asked why that made the action okay or not.

All of the prompts used in the structured interview about the personal event are presented in Table A1, in chronological order.

| Really bad | | | | | | | | | | Really good |

```
├---------------------------------------------------------------------------------┤
0       1       2       3       4       5       6       7       8       9       10
```
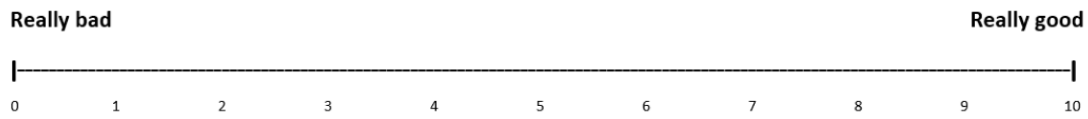
Figure A1. Evaluative rating scale, printed on a sheet of paper and presented in interviews.

Table A1
Interview Prompts in Study 1, Listed in Chronological Order

Interview prompt	Topic	When	Example quote
Why did you do [action]?	Motivation	Then	*"It's my friend, and he was pretty confused. So I was helping him"*
At the time, did you think [action] was okay or not okay?	Evaluation	Then	*"I knew that it wasn't right"*
Why/why not?	Evaluation	Then	*"She was relying on me in high school […] It wasn't gonna help her at all when she was alone"*
Back then, how would you have rated it on this scale (Figure A1)?	Rating	Then	[Rating from 0 to 10]
At the time, did you think [action] was [plagiarism / academic misconduct]?	Perception	Then	[Yes or No]
Looking back on it, do you now think [action] was okay or not okay?	Evaluation	Now	*"Now I gained a better understanding of plagiarism, and I know what I did back then and it just wasn't good"*
How would you now rate [action] on the scale?	Rating	Now	[Rating from 0 to 10]
Looking back on it, do you now think [action] was [plagiarism / academic misconduct]?	Perception	Now	[Yes or No]
What if [school] had no rules at all against [action]? Would it be okay or not okay?	Rule alteration	Now	[Okay or Not okay]

After discussing the personal event, participants were asked several general questions about academic misconduct (e.g., "If you knew someone was engaging in academic misconduct, would you report it to anyone?"; Waltzer et al., 2021).

Finally, they were asked about the following demographic information: academic major, gender, age, hometown, whether they/their parents were born in the

United States, what their parents' education levels were, first-generation status, international status, and languages known (see https://osf.io/gc3ty/).

Data Coding and Reliability

All transcribed quotes were entered into a spreadsheet and split into individual lines. The data was split such that each line represented at least one concept or idea that could be classified by at least one of the categorization schemes. Each of these lines was considered a *statement*. The content of each statement was assessed for several categorization schemes.

Reliability was assessed by calculating agreement (Cohen's κ) on a subset of the data (20% of the statements per dataset) that had been coded independently by two researchers (McHugh, 2012). For a summary of all agreement scores, see Table A2 (Study 1) and Table B1 (Study 2). After agreement was achieved, both researchers coded the remaining statements. Any disagreements were discussed and final codes were assigned after reaching a consensus. Below, we provide further elaboration on the categorization schemes that was not covered in the main text.

Table A2
Coding Schemes and Agreement Scores (κ) in Study 1

Coding Scheme	κ	Description
Act classification		
Does the act count as cheating?	.96	Classification of the act as *clearly cheating, presumably cheating,* or *not cheating*
Judgment		
Why did it – for or against	1.00	Whether the statements (in response to the prompt, "why did you do what you did?") contain a positive or negative judgment about the act
Why OK – for or against	.94	Whether the statements (in response to the prompt, "why was [action] okay/not okay?") contain a positive or negative judgment about the act
Reason		
Why did it – stable feasibility	1.00	Reasons pertaining to long-term constraints on the feasibility of the task, e.g. chronic medical conditions or years of struggling with math
Why did it – situational feasibility	.96	Reasons involving temporary constraints on feasibility, e.g. time pressure, stress, lack of sleep
Why did it – inherent valuing	1.00	Concerns about the inherent value of the task or action, such as moral concerns (*fairness, honesty*) or academic priorities (*value of assignment*)
Why did it – extrinsic valuing	.91	Concerns about external consequences of the act, such as obtaining a grade or being punished
Why did it – labeling	.93	Descriptive facts about the academic context, such as whether the action is against the rules
Why did it – overall	.93	Overall agreement calculated across all of the sub-categories

Why OK – reason	.95	Reasons for why the act was OK or not OK, including labeling as cheating, moral concerns, learning concerns, external consequences, etc.
Why did it and why OK – pooling	.80	To simplify presentation of the coding schemes across Studies 1 and 2, the above coding schemes were re-assigned into the pooled categories presented in the main text: *academic labeling, feasibility, assignment goals, relationship goals, evaluative labeling, rights and respect, others' welfare, other*
Uncertainty		
Categorization at time of event	1.00	Uncertainty or confusion about whether the act constitutes cheating (at the time of acting)
Categorization during interview	1.00	Uncertainty or confusion about whether the act constitutes cheating (at the time of the interview)
Evaluation at time of event	.77	Hesitation or ambivalence about whether the action was okay (at the time of acting)
Evaluation during interview	.94	Hesitation or ambivalence about whether the action was okay (at the time of the interview)

Reasons. In the initial coding of the data, we applied two slightly different coding schemes to the *motivations* responses ("why did you do what you did?") and the *evaluations* responses ("why as what you did okay/not okay?").

To streamline the presentation of the coded data, and make it more comparable to Study 2, we went back to re-code them into a pooled scheme that covered reasons in both studies ($\kappa = .80$). The pooled reasons categories were as follows: *academic labeling, feasibility, assignment goals, relationship goals, evaluative labeling, rights and respect, others' welfare,* and *other* (see https://osf.io/hkem6/ for a summary of how sub-categories were assigned to pooled categories).

Results

Perceptions: Did Students Fail to Recognize Their Cheating at the Time?

Demographic factors. We wanted to examine whether any demographic factors significantly predicted participants' responses. We modeled the following demographics as predictors: *age at the time, gender, whether their first language was English, college generational status,* and *international status.*

None of the demographic factors significantly predicted whether participants *believed they were cheating at the time of the event,* Ds < 2.20, ps $> .334$.

The participant's age at the time of the event significantly predicted presence of uncertainty about whether they were cheating. Participants *who had been uncertain* at the time of the event were significantly younger ($M_{age} = 15.33$) than those who *had not been uncertain* ($M_{age} = 18.11$), $D(1) = 7.18$, $p = .007$. No other demographic factors significantly predicted uncertainty, Ds < 1.19, ps $> .276$.

Plagiarism versus other cheating. As mentioned in the main text, participants were less likely to have believed their actions constituted cheating at the

time if they were in the *plagiarism* condition compared to the *other cheating* condition, $p < .001$. Spontaneous expressions of uncertainty, on the other hand, did not differ between *plagiarism* and *other cheating* acts, $D(1) = 0.50$, $p = .480$.

Comparing perceptions across time. Participants were more likely to believe their actions constituted cheating at the time of the interview (76%) compared to at the time of the event (48%), $D(1) = 49.72$, $p < .001$. The number of days that had elapsed since the event ($M_{time} = 595.60$ days) did not significantly predict perceptions of cheating, $D(1) = 1.91$, $p = .167$.

Evaluations: Did Students Think Their Actions Were Okay at the Time?

Demographic factors. Participants' judgments of whether their actions were wrong at the time of acting did not differ across demographic factors (e.g., age, gender), $Ds < 2.23$, $ps > .136$. As for evaluative uncertainty, age and gender did have significant effects. Participants who were *older* ($M_{age} = 18.51$) and *female* (66%) were more likely than those who were *younger* ($M_{age} = 17.23$) and *male* (35%) to indicate they had experienced uncertainty about whether their actions were alright, $Ds(1) > 7.25$, $ps < .008$.

Judgments and uncertainty. As mentioned in the main text, most participants spontaneously expressed uncertainty about whether they thought what they were doing was alright at the time of the event. There was an interaction effect between *cheating perception* and *evaluative judgment* in predicting uncertainty, $D(1) = 4.99$, $p = .026$. Analyses of simple main effects revealed that participants who did not think they were cheating were much more likely to express uncertainty if they thought what they did was *wrong* (100%) compared to those who thought it was *not wrong* (36%), $D(1) = 11.69$, $p < .001$. There was no effect of judgment on uncertainty among students who thought they had cheated (70%), $D(1) = 0.70$, $p = .403$.

Reasons against actions not perceived as cheating. As mentioned in the main text, some of the participants who thought their actions did not constitute cheating nevertheless judged their actions as wrong at the time (21%, $n = 7$). Here are most common reasons these participants gave for why their actions were wrong: *academic labeling* (71%), *rights and respect* (71%), and *academic goals* (57%, e.g., about learning or grades). Because we dichotomized participants' beliefs about whether they were cheating as either "yes" or "no," more nuanced perceptions were not captured by this method of grouping participants.

Rule modification. Participants were asked whether they thought their action would have been alright if there had been no rules against the action at their school. At the time of the interview, participants largely disapproved of their actions, with only 29% saying what they did was alright looking back on it. Removing the rule made their judgments significantly more approving. Participants were more likely to say their actions would be alright if there were *no rules* against them (71%) than in the *default* case (29%), $D(1) = 18.36$, $p < .001$.

Motivations: Did Students' Concerns Conflict With Acting Honestly?

In the main text, we discussed how participants who believed they were cheating provided more statements as motivations for why they did what they did. Similarly, they said more words in favor of their actions when they *thought they were*

cheating ($M_{wordcount} = 125.43$) compared to when they *did not think they were cheating* ($M_{wordcount} = 95.66$), $D(1) = 124.75$, $p < .001$.

In contrast, the number of statements did *not* differ by whether participants believed their actions were *wrong* at the time ($M_{statements} = 10.19$, $SD = 7.63$), $D(1) = 0.57$, $p = .452$.

Additional Analyses

Across the entire interview (including "why okay" and "why did it" prompts, as well as "then" and "now" responses), participants provided on average 15.25 statements in favor of their actions ($SD = 10.02$), and only 4.80 statements against their actions ($SD = 3.78$). At an individual level, 84% provided at least one statement against their actions (all participants provided at least one statement in favor of their action).

Appendix B: Supplementary Materials for Study 2

This Appendix contains additional details about the methods and results for Study 2. Further documentation and raw data are available on the Open Science Framework (OSF) at https://osf.io/85vsq/.

Method
Participants

Most participants had declared or intended to major in Computer Science (52%) or Computer Engineering (15%). Other common majors included Computer Game Design (6%), Technology and Information Management (6%), Electrical Engineering (4%), and Robotics Engineering (3%). The interview was presented as an opportunity for students to share their experiences, difficulties, and suggestions for improvement as students in engineering classes. Students were offered course credit and entry into a raffle for two $100 gift cards for their participation in the study. Interviews were conducted in accordance with the university's Institutional Review Board.

Materials and Procedure

In-person interview. Here we provide more details on the interview protocol. As mentioned in the main text, interviews lasted up to thirty minutes and were audio recorded. Participants were reassured about the confidential nature of the interview. Participants' names were not linked to their data. First, students were asked how they would define academic misconduct. Then, they were shown the following brief passage about academic misconduct, adapted from the university's academic policy. The passage is below:

> *Academic misconduct includes, but is not limited to, cheating, fabrication, plagiarism, and facilitating academic dishonesty. For example, cheating is defined as dishonesty in an academic assignment, or attempting to use or assist others in using prohibited materials for an assignment. This can include providing or receiving information from others on an assignment, using notes or other prohibited resources on assessments, collaborating on an assignment without seeking permission to do so, and putting your name on another's assignment.*

Participants were asked, "Can you think of the most recent time you did something in [class] that could count as academic misconduct, under the [school name] policy?" After reminding the participant about confidentiality, the interviewer prompted the participant to think of the most recent event for which they could recall many details.

If participants could not think of a recent example of an action in one of their engineering classes, the interviewer provided a list of example actions (specific to computer science), printed on a piece of paper. There were 13 examples (e.g., "Letting someone **use your own code** to facilitate completion of their own assignment"). For the full list, see https://osf.io/h8qtb/.

Data Coding and Reliability

As in Study 1, the interviews were transcribed, split into statements, and entered into a spreadsheet for coding of open-ended responses.

Two researchers were trained on how to apply the coding schemes. The coding schemes used in Study 2 were very similar to those used in Study 1. The schemes from Study 1 were refined: In particular, we combined the two reason schemes that were previously separate (for "why OK" and "why did it" prompts) and now distinguished between *cheating judgments* and *action judgments.*

Reliability was assessed in the same manner as in Study 1. Table B1 provides a summary of all agreement scores for the coding schemes used in Study 2.

Table B1
Coding Schemes and Agreement Scores (κ) in Study 2

Coding Scheme	κ	Description
Act classification		
Does the act count as cheating?	.86	Same as Study 1
Judgment		
Cheating judgment	.86	Every statement was coded for whether it was *for cheating, against cheating,* or *N/A*
Action judgment	.98	Every statement was coded for whether it was *for the described action, against the action,* or *N/A*
Reason		
Feasibility	.94	Stable and situational feasibility were combined into a single scheme because stable codes were rare
Inherent valuing	.96	Same as in Study 1
Extrinsic valuing	.96	Same as in Study 1
Labeling	.91	Same as in Study 1
Overall	.94	Overall agreement for the reason schemes
Uncertainty		
Categorization	.90	Same as in Study 1
Evaluation	.92	Same as in Study 1

Like in Study 1, the *reason* codes were pooled into several categories presented in the main text: *academic labeling, feasibility, assignment goals, relationship goals, evaluative labeling, rights and respect, others' welfare,* and *other* (see https://osf.io/hkem6/).

Results

Perceptions: Did Students Fail to Recognize Their Cheating at the Time?

Demographic factors. As in Study 1, we tested whether several demographic factors would be significant predictors of students' perceptions: *age, gender, whether English was their first language, college generational status,* and *international status.* None of these factors significantly predicted participants' beliefs about whether they were cheating at the time of the act, $Ds < 1.70$, $ps > .427$, nor did they predict participants' spontaneous expressions of uncertainty, $Ds < 2.04$, $ps > .153$.

Other predictors. As mentioned in the main text, there was no difference in perceptions of cheating between *plagiarism* and *other cheating* acts, $D(1) = 2.11$, $p = .146$. Actions classified as *clearly cheating* were more likely to be perceived as cheating (30%) compared to those classified as *presumably cheating* (10%), $D(1) = 7.01$, $p = .008$. This result helped validate the scheme we used to classify the actions. Still, many participants did not believe they were cheating, highlighting how even actions that seem likely to constitute cheating can still evoke disagreements.

Evaluations: Did Students Think Their Actions Were Okay at the Time?

Demographic factors. None of the demographic factors was a significant predictor of participants' judgments about whether their actions were wrong at the time of the event, $Ds < 2.74$, $ps > .098$. Similarly, none of them predicted the presence of evaluative uncertainty, $Ds < 2.89$, $ps > .236$.

Rule modification. Similar to Study 1, participants were more likely to say their actions were okay when they were asked to imagine if there had been *no rules against what they did* (90%) compared to the *default case* (85%), $D(1) = 6.88$, $p = .009$.

Comparing judgments across time. The amount of time that had elapsed since the act significantly predicted judgments. Participants were more likely to change their judgment since the time of the action (i.e., judging the action as *not wrong* at the time of the event, but switching to *wrong* at the time of the interview) if they had happened longer ago ($M_{time} = 195.71$ days) whereas those who did not change their judgment described actions that were more recent ($M_{time} = 64.40$ days), $F(1,104) = 6.03$, $p = .016$.

Other predictors of acceptability. The *beneficiary of the cheating act* (e.g., self, peer, group), *broad type of act* (plagiarism, other cheating), and *number of days since the act* did not significantly predict judgments that their act was *wrong*, $Ds < 2.21$, $ps > .137$. These findings may reflect the fact that participants' evaluations of their actions were near-ceiling, regardless of grouping (only 5% thought their actions were wrong).

Bibliography

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-221). Mahwah, NJ: Erlbaum.

Ariely, D. (2012). *The honest truth about dishonesty: How we lie to everyone – especially ourselves.* Harper Collins.

Ashworth, P., Bannister, P., & Thorne, P. (1997). Guilty in whose eyes? University students' perceptions of cheating and plagiarism in academic work and assessment. *Studies in Higher Education, 22*(2), 187-203. https://doi.org/10.1080/03075079712331381034

Bandura, A. (2016). *Moral disengagement: How people do harm and live with themselves.* New York, NY: Macmillan Higher Education.

Barnhardt, B. (2016). The "epidemic" of cheating depends on its definition: A critique of inferring the moral quality of "cheating in any form." *Ethics & Behavior, 26*(4), 330-343. https://doi.org/10.1080/10508422.2015.1026595

Bertram Gallant, T. (2008). *Academic integrity in the twenty-first century: A teaching and learning imperative.* San Francisco: Jossey-Bass.

Bertram Gallant, T., Binkin, N., & Donohue, M. (2015). Students at risk for being reported for cheating. *Journal of Academic Ethics*, *13*, 217-228. https://doi.org/10.1007/s10805-015-9235-5

Bertram Gallant, T., & Stephens, J. M. (2020). Punishment is not enough: The moral imperative of responding to cheating with a developmental approach. *Journal of College & Character, 21,* 57-66. https://doi.org/10.1080/2194587X.2020.1741395

Bidgood, J., & Merrill, J. B. (2017, May 29). As computer coding classes swell, so does cheating. *New York Times.* Retrieved from https://www.nytimes.com/2017/05/29/us/computer-science-cheating.html

Borg, E. (2009). Local plagiarisms. *Assessment & Evaluation in Higher Education, 34,* 415–426. https://doi.org/10.1080/02602930802075115

Bunn, D., Caudill, S., & Gropper, D. (1992). Crime in the classroom: An economic analysis of undergraduate student cheating behavior. *The Journal of Economic Education, 23*, 197-207. https://doi.org/10.2307/1183222

Cizek, G. J. (2003). *Detecting and preventing classroom cheating: Promoting*

integrity in assessment. Corwin Press.

Curtis, G. J., & Vardanega, L. (2016). Is plagiarism changing over time? A 10-year time-lag study with three points of measurement. *Higher Education Research & Development, 35*, 1167-1179. https://doi.org/10.1080/07294360.2016.1161602

Dahl, A. (2017). Ecological commitments: Why developmental science needs naturalistic methods. *Child Development Perspectives, 11,* 79-84. https://doi.org/10.1111/cdep.12217

Dahl, A., Gingo, M., Uttich, K., & Turiel, E. (2018). Moral reasoning about human welfare in adolescents and adults: Judging conflicts involving sacrificing and saving lives. *Monographs of the Society for Research in Child Development*, *83*(3), 1-109. https://doi.org/10.1111/mono.12374

Dahl, A., & Killen, M. (2018). Moral reasoning: Theory and research in developmental science. In J. T. Wixted & S. Ghetti (Eds.), *The Stevens' handbook of experimental psychology and cognitive neuroscience* (4th ed., Vol. 4)*.* New York, NY: Wiley.

Dahl, A., & Waltzer, T. (2018). Moral disengagement as a psychological construct. *American Journal of Psychology, 131,* 240-246. https://doi.org/10.5406/amerjpsyc.131.2.0240

Davis, S. F., Grover, C. A., Becker, A. H., & McGregor, L. N. (1992). Academic dishonesty: Prevalence, determinants, techniques, and punishments. *Teaching of Psychology, 19*, 16-20. https://doi.org/10.1207%2Fs15328023top1901_3

DeBernardi, F. C., Waltzer, T., & Dahl, A. (2021). Cheating contextualized: How academic pressures lead to moral exceptions. *Talk presented at the 47th Annual Association for Moral Education Conference,* Virtual.

Deckert, G. D. (1993). Perspectives on plagiarism from ESL students in Hong Kong. *Journal of Second Language Writing, 2,* 131-48. https://doi.org/10.1016/1060-3743(93)90014-T

Fang, F. C., & Casadevall, A. (2013). Why we cheat. *Scientific American Mind, 24*(2), 31-37. https://www.scientificamerican.com/article/why-we-cheat/

Freeman, V. G., Rathore, S. S., Weinfurt, K. P., Schulman, K. A., & Sulmasy, D. P. (1999). Lying for patients: Physician deception of third-party payers. *Archives of Internal Medicine*, *159*(19), 2263–2270. https://doi.org/10.1001/archinte.159.19.2263

Franklyn-Stokes, A., & Newstead, S. E. (1995). Undergraduate cheating: Who does what and why? *Studies in Higher Education, 20*, 159-172. https://doi.org/10.1080/03075079512331381673

Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: The effect of one bad apple on the barrel. *Psychological Science, 20*(3), 393–398. https://doi.org/10.1111/j.1467-9280.2009.02306.x

Gullifer, J., & Tyson, G. (2014). Who has read the policy on plagiarism? Unpacking students' understanding of plagiarism. *Studies in Higher Education, 39*, 1202-1218. https://doi.org/10.1080/03075079.2013.777412

Haines, V. J., Diekhoff, G. M., LaBeff, E. E., & Clark, R. E. (1986). College cheating: Immaturity, lack of commitment and the neutralizing attitude. *Research in Higher Education, 25*, 342-354. https://doi.org/10.1007/BF00992130

Hale, J. L. (1987). Plagiarism in classroom settings. *Communication Research Reports, 4*, 66-70.

Harding, T. S., Mayhew, M. J., Finelli, C. J., & Carpenter, D. D. (2007). The theory of planned behavior as a model of academic dishonesty in engineering and humanities undergraduates. *Ethics and Behavior*, *17*, 255-279. https://doi.org/10.1080/10508420701519239

Hartshorne, H., & May, M. A. (1928). *Studies in the nature of character: Vol. I. Studies in deceit.* New York: Macmillan.

Hox, J. (2010). *Multilevel analysis: Techniques and applications* (2nd Edition). Routledge.

Jensen, L. A., Arnett, J. J., Feldman, S. S., & Cauffman, E. (2002). It's wrong, but everybody does it: Academic dishonesty among high school and college students. *Contemporary Educational Psychology, 27*, 209-228. https://doi.org/10.1006/ceps.2001.1088

Kant, I. (2012). *Groundwork of the metaphysics of morals* (M. Gregor & J. Timmermann, Trans.). Cambridge University Press. (Original work published 1785).

Killen, M., & Dahl, A. (2021). Moral reasoning enables developmental and societal change. *Perspectives on Psychological Science, 16*(6), 1209-1225. https://doi.org/10.1177/1745691620964076

Kohlberg, L. (1971). From is to ought: How to commit the naturalistic fallacy and get

away with it in the study of moral development. In T. Mischel (Ed.), *Cognitive development and epistemology* (pp. 151-235). New York, NY: Academic Press.

Lang, J. M. (2013). *Cheating lessons: Learning from academic dishonesty.* Cambridge, MA: Harvard University Press.

Lee, J. A., Bardi, A., Gerrans, P., Sneddon, J., van Herk, H., Evers, U., & Schwartz, S. (in press). Are value-behavior relations stronger than previously thought? It depends on value importance. *European Journal of Personality.*

Lee, S. D., Kuncel, N. R., & Gau, J. (2020). Personality, attitude, and demographic correlates of academic dishonesty: A meta-analysis. *Psychological Bulletin, 146*, 1042–1058. https://doi.org/10.1037/bul0000300

Levine, T. R., Kim, R. K., & Hamel, L. M. (2010). People lie for a reason: Three experiments documenting the principle of veracity. *Communication Research Reports, 27*(4), 271-285. https://doi.org/10.1080/08824096.2010.496334

Martin, D. E., Rao, A., & Sloan, L. R. (2011). Ethnicity, acculturation, and plagiarism: A criterion study of unethical academic conduct. *Human Organization, 70*(1), 88-96. https://doi.org/10.17730/humo.70.1.nl775v2u633678k6

McCabe, D. L. (1997). Classroom cheating among natural science and engineering majors. *Science and Engineering Ethics, 3,* 433-445. https://doi.org/10.1007/S11948-997-0046-Y

McCabe, D. L., Butterfield, K. D., & Treviño, L. K. (2012). *Cheating in college: Why students do it and what educators can do about it*. Baltimore, MD: Johns Hopkins Press.

McCabe, D. L., Fenghali, T., & Abdallah, H. (2008). Academic dishonesty in the Middle East: Individual and contextual factors. *Research Higher Education, 49*(1), 451-467. http://dx.doi.org/10.1007/s11162-008-9092-9

McCabe, D. L., & Treviño, L. K. (1993). Academic dishonesty: Honor codes and other contextual influences. *The Journal of Higher Education, 64*, 522–538. https://doi.org/10.2307/2959991

McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (2002). Honor codes and other contextual influences on academic integrity: A replication and extension to modified honor code settings. *Research in Higher Education, 43*(3), 357-378. https://doi.org/10.1023/A:1014893102151

McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica, 22,* 276-282. https://doi.org/10.11613/BM.2012.031

Mervis, J. (2011). Weed-out courses hamper diversity. *Science, 334*, 1333. https://doi.org/10.1126/science.334.6061.1333

Miller, A., Shoptaugh, C., & Wooldridge, J. (2011). Reasons not to cheat, academic-integrity responsibility, and frequency of cheating. *Journal of Experimental Education, 79*(2), 169–184. https://doi.org/10.1080/00220970903567830

Miller, C. B. (2021). *Honesty: The philosophy and psychology of a neglected virtue.* Oxford University Press USA - OSO.

Moss, S. A., White, B., & Lee, J. (2018). A systematic review into the psychological causes and correlates of plagiarism. *Ethics and Behavior, 28,* 261-283. https://doi.org/10.1080/10508422.2017.1341837

Murdock, T. B., Stephens, J. M., & Grotewiel, M. M. (2016). Student dishonesty in the face of assessment: Who, why, and what we can do about it. In G. T. Brown & L. Harris (Eds.), *Handbook of human factors and social conditions in assessment* (pp. 186-203). London, England: Routledge.

Nathan, R. (2005). *My freshman year: What a professor learned by becoming a student.* New York: Penguin Books.

Newstead, S. E., Franklyn-Stokes, A., & Armstead, P. (1996). Individual differences in student cheating. *Journal of Educational Psychology, 88*(2), 229–241. https://doi.org/10.1037/0022-0663.88.2.229

Nucci, L., Turiel, E., & Roded, A. D. (2017). Continuities and discontinuities in the development of moral judgments. *Human Development, 60*(6), 279-341. https://doi.org/10.1159/000484067

Ottaway, K., Murrant, C., & Ritchie, K. (2017). Cheating after the test: Who does it and how often? *Advances in Physiology Education, 41*(3), 368-374. https://doi.org/10.1152/advan.00103.2016

Park, C. (2003). In other (people's) words: Plagiarism by university students – literature and lessons. *Assessment and Evaluation in Higher Education, 28*, 471-88. https://doi.org/10.1080/02602930301677

Perkins, S. A., & Turiel, E. (2007). To lie or not to lie: To whom and under what circumstances. *Child Development, 78,* 609-621. https://doi.org/10.1111/j.1467-8624.2007.01017.x

Rettinger, D. A. (2007). Applying decision theory to academic integrity decisions. In E. M. Anderman & T. B. Murdock (Eds.), *Psychology of academic cheating* (pp. 141-167). Academic Press. https://doi.org/10.1016/B978-012372541-7/50011-5

Rettinger, D. A. (2017). The role of emotions and attitudes in causing and preventing cheating. *Theory Into Practice, 56(2)*, 103-110. https://doi.org/10.1080/00405841.2017.1308174

Rettinger, D. A., Jordan, A. E., & Peschiera, F. (2004). Evaluating the motivation of other students to cheat: A vignette experiment. *Research in Higher Education, 45*(8), 873-890. https://doi.org/10.1007/s11162-004-5952-0

Rettinger, D. A., & Kramer, Y. (2009). Situational and personal causes of student cheating. *Research in Higher Education, 50*(3), 293-313. http://doi.org/10.1007/s11162-008-9116-5

Rettinger, D. A., Tatum, H., & Schwartz, B. M. (2017). This issue: Theoretical approaches to understanding and promoting academic integrity. *Theory Into Practice, 56*(2), 85-87. https://doi.org/10.1080/00405841.2017.1318627

Roig, M. (1997). Can undergraduate students determine whether text has been plagiarized? *Psychological Record, 47,* 113-122. https://doi.org/10.1007/BF03395215

Roig, M. (2001). Plagiarism and paraphrasing criteria of college and university professors. *Ethics & Behavior, 11*, 307-323. https://doi.org/10.1207/S15327019EB1103_8

Rundle, K., Curtis, G. J., & Clare, J. (2019). Why students do not engage in contract cheating. *Frontiers in Psychology, 10,* 2229. https://doi.org/10.3389/fpsyg.2019.02229

Rundle, K., Curtis, G. J., & Clare, J. (2020). Why students choose not to cheat. In T. Bretag (Ed.), *A research agenda for academic integrity* (pp. 100-111). Elgar Research Agendas. https://doi.org/10.4337/9781789903775

Schab, F. (1991). Schooling without learning: Thirty years of cheating in high school. *Adolescence, 26*, 839-847.

Shi, L. (2004). Textual borrowing in second-language writing. *Written Communication, 21,* 171-200. https://doi.org/10.1177%2F0741088303262846

Stephens, J. M. (2018). Bridging the divide: The role of motivation and self-regulation in explaining the judgment-action gap related to academic

dishonesty. *Frontiers in Psychology, 9,* 246.
https://doi.org/10.3389/fpsyg.2018.00246

Stephens, J. M., & Nicholson, H. (2008). Cases of incongruity: Exploring the divide
between adolescents' beliefs and behaviors related to academic cheating.
Educational Studies, 34, 361-376.
https://doi.org/10.1080/03055690802257127

Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of
delinquency. *American Sociological Review, 22*(6)*,* 664–
670. https://doi.org/10.2307/2089195

Teixeira, A. A. C., & Rocha, M. F. (2010). Cheating by economics and business
undergraduate students: An exploratory international assessment. *Higher
Education, 59*, 663-701. https://doi.org/10.1007/s10734-009-9274-1

Turiel, E. (2003). Morals, motives and actions. *British Journal of Developmental
Psychology Monograph Series, 2*, 29–40.

Turiel, E., & Dahl, A. (2019). The development of domains of moral and
conventional norms, coordination in decision-making, and the implication of
social opposition. In K. Bayertz & N. Roughley (Eds.), *The normative animal:
On the anthropological significance of social, moral, and linguistic norms*.
Oxford, England: Oxford University Press.

Wainryb, C. (1991). Understanding differences in moral judgments: The role of
informational assumptions. *Child Development, 62*, 840-851.
https://doi.org/10.2307/1131181

Waltzer, T., & Dahl, A. (2021). Students' perceptions and evaluations of plagiarism:
Effects of text and context. *Journal of Moral Education, 50*(4), 436-451.
http://doi.org/10.1080/03057240.2020.1787961

Waltzer, T., & Dahl, A. (in press). The moral puzzle of academic cheating:
Perceptions, evaluations, and decisions. In D. A. Rettinger & T. Bertram
Gallant (Eds.), *Cheating academic integrity: Lessons from 30 years of
research.* Wiley/Jossey Bass.

Waltzer, T., Dahl, A., Samuelson, A., Chen, K., Baxley, C., & Bareket-Shavit, C.
(2019). Narrowing the judgment-action gap: The case of student cheating.
*Poster presented at the Society for Philosophy and Psychology annual
meeting,* San Diego, CA.

Waltzer, T., Samuelson, A., & Dahl, A. (in press). Students' reasoning about whether
to report when others cheat: Conflict, confusion, and consequences. *Journal of*

   Academic Ethics. https://doi.org/10.1007/s10805-021-09414-4

Whitley, B. E. (1998). Factors associated with cheating among college students: A
  review. *Research in Higher Education, 39*, 235-274.
  https://doi.org/10.1023/A:1018724900565