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Academic Background and Moral Decision-Making: Insights from the Trolley Problem

Abstract

This article presents the results of a study on the relationship between academic education and students' ethical decisions. To determine whether field of study correlates with choices in moral dilemmas, we conduct a survey confronting respondents with the Trolley Problem—a famous thought experiment that requires reference to fundamental moral

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norms, in which the respondent must decide whether to sacrifice the life of one person in order to save five others. Analysis of the empirical data gathered from students across a wide range of academic disciplines—including humanities, medicine, social sciences, natural sciences, and fine arts (N = 1084)—revealed differences in the response distributions among the studied groups. Students in medical and health sciences, as well as those studying national security and military studies, were more likely to express a willingness to sacrifice one life in order to save five compared to students from other fields. Contrary to our expectations, it turned out that despite the importance of the utility maximisation concept in economic theory and teaching, economic education is not correlated with a greater tendency to make active ("utilitarian") choices. Our findings suggest that academic education may shape students 'moral decisions, but this influence is most evident in professional contexts and ethical challenges specific to their field of study.

Keywords: ethical dilemma, higher education, Trolley Problem, moral norms, academic disciplines, economics, medical sciences

Streszczenie

Artykuł przedstawia wyniki badania zależności pomiędzy edukacją akademicką a decyzjami etycznymi studentów. W celu ustalenia, czy kierunek studiów koreluje z podejmowaniem określonych wyborów w dylematach moralnych, przeprowadzono badanie ankietowe, w którym respondenci zostali postawieni przed tzw. problemem wagonika (the Trolley Problem) – eksperymentem myślowym wymagającym odwołania się do fundamentalnych norm moralnych, w którym respondent musi podjąć decyzję, czy poświęcić życie jednej osoby, by uratować pięć innych. Analiza materiału empirycznego uzyskanego od studentów reprezentujących szerokie spektrum dyscyplin, obejmujące nauki humanistycznych, medyczne, społeczne, ścisłe oraz sztuki plastyczne (N = 1084), ujawniła istnienie różnic między rozkładami odpowiedzi badanych grup. Studenci kierunków medycznych i nauk o zdrowiu oraz osoby studiujące bezpieczeństwo narodowe i wojskoznawstwo częściej niż studenci innych dyscyplin deklarowali gotowość poświęcenia życia jednej osoby w celu uratowania pięciu. Wbrew naszym oczekiwaniom okazało się, że wykształcenie ekonomiczne nie koreluje z większą skłonnością do podejmowania aktywnych („utylitarnych") decyzji, mimo kluczowej roli koncepcji maksymalizacji użyteczności w teorii ekonomii i edukacji ekonomicznej. Uzyskane wyniki sugerują, że edukacja akademicka może wpływać na decyzje moralne studentów, jednak oddziaływanie to jest widoczne głównie w kontekście zawodowym oraz w obliczu etycznych wyzwań specyficznych dla danej dziedziny.

Słowa kluczowe: dylemat etyczny, edukacja wyższa, problem wagonika, normy moralne, dyscypliny akademickie, ekonomia, nauki medyczne

Introduction

Does academic education affect moral attitudes? Given the criticisms of economic and business education for allegedly shaping overly calculating individuals (cf. Etzioni 2015; Raworth 2017), as well as

broader concerns about academia fostering liberal and left-leaning perspectives influenced by moral relativism (Bloom 1987), the answer appears straightforward. The power to influence students' values and attitudes is also declared by the higher education institutions themselves, which, in their curricula and programs of studies, promise to instill and cultivate positive attitudes and values of professional ethics. However, studies on moral development suggest that ethical foundations are formed significantly earlier, a long time before students enter the university lecture halls for the first time (Kohlberg 1963; Kiley, Vaisey 2020). The moral core is understood to be shaped in early childhood, and ethical norms are considered internalized during socialization occurring from that time on. Thus, the question of whether there is still any space for influencing the morality of young adults through academic education remains debatable.

Our study aims to contribute to the discussion on the relationship between academic education and students' ethical values by examining whether and, if so, to what extent academic curriculum correlates with their decisions in the Trolley Problem—the famous sacrificial dilemma which requires reference to fundamental moral norms (Foot 1967; Thomson 1976; 1985). The respondent faced with this thought experiment must decide whether to leave the lever unchanged, allowing the train to continue its current track and kill five people, or to switch the lever, redirecting the train onto a side track where it will kill one person instead.

The decision to sacrifice one person to save five lives is commonly seen as stemming from consequentialism/utilitarianism (maximization of the common good), whereas the passive approach is interpreted as grounded in deontology by staying true to the "thou shalt not kill" principle (cf. Greene et al. 2004; Lanteri et al. 2008; Bago et al. 2022).

We hypothesized that academic discipline is a factor associated with differences in respondents' decisions in ethical dilemmas. In particular, we expected that students of Medical and Health Sciences, being prepared to deal with decisions related to human health and life, and students of Economics, who are trained in rational utility maximization, would take the active ("utilitarian") approach more frequently than other students. Similarly, we also supposed that prior economic education would correlate with a higher proportion of active ("utilitarian") choices.

Our evidence (N = 1,084), collected through an anonymous questionnaire in one of the leading academic centres in Poland confirms that there are significant differences in the reactions of representatives of various academic disciplines to the Trolley Problem. Medical and Health Sciences students are indeed more likely to take the active approach.

However, this is not the case for students of Economics, whose response distribution closely mirrors the average distribution for the entire sample. Additionally, contrary to our expectations but consistent with this finding, prior economic education does not contribute to a higher proportion of active choices. Besides students of Medical and Health Sciences, the group most willing to save five people by sacrificing one was National Security and Military Studies students. We suppose that the revealed alterations in responses among students of different academic disciplines illustrate that in certain fields, professionals are more accustomed to sacrificial problems where human life is at stake, requiring them to think in terms of the survival of a group—be it a population, a society or a nation under attack—and to perceive the active decision as the ethically right. However, despite being the foundation of rational choice theory and employed to explain economic behavior as a standard tool in economic teaching, utility maximization does not translate into a higher proportion of active ("utilitarian") choices by economics students in ethical dilemmas, where maximization refers not to profits or consumer utility from a given income, but to people's lives. To conclude, our study supports the claim that academic education can contribute to shaping students' ethical frameworks. However, it seems to affect these ethical decisions, which remain closer to the professional context.

The paper begins with a literature review that highlights the key points in two main discussions: first, the Trolley Problem, and second, the influence of academic education on students' attitudes and values. The subsequent sections present the research design and empirical evidence. This is followed by a discussion of our findings compared with the current state of the debate on the impact of academic teaching on students' ethical norms. Finally, the paper concludes with a summary of the main insights derived from the study.

Literature review

Sacrificial ethical dilemmas. The Trolley Problem

The scientific discourse on sacrificial ethical dilemmas was invigorated by Phillipa Foot's seminal paper *The Problem of Abortion and the Doctrine of the Double Effect* (1967), where she deliberated on circumstances in which it would be morally acceptable to sacrifice the life of a child to save the pregnant mother if their lives were in danger. Looking for parallels, among a dozen other examples, she mentioned the case of a runaway tram, the driver of which "can only steer from

one narrow track on to another; five men are working on one track and one man on the other; anyone on the track he enters is bound to be killed" (1967: 8). The tram narrative was transformed into the famous Trolley Problem scenario by Judith J. Thompson (1976; 1985) who significantly contributed to the discussion by contrasting cases in which the same result was produced by an intentional decision to cause it or neglect to act. By juxtaposing scenarios such as the standard Trolley Problem (*Bystander at the Switch*) and versions named the *Fat Man*, where to stop the trolley, we are supposed to push the extremely obese person from the footbridge over the trolley track, and the *Transplant*, where we play a role of a transplant surgeon who may distribute young, healthy person's organs to five patients waiting for an organ donor, Thompson showed that even if the outcomes of our decisions are the same, i.e., saving five lives by sacrificing one, people tend to strongly prefer saving five in some cases, while are strongly against it in the others. Putting the difference at the forefront, she argued that narrative and context matter a lot in our perception of what is morally permissible. This hypothesis found support in empirical research conducted by Greene and his team (2001; 2004), who studied differences in brain areas' activity when respondents were confronted with scenarios requiring imagining direct, physical intervention and narratives in which the physical contact between the decision-maker and the harmed individual was not necessary. Participants responded emotionally when faced with the first type of situation, like the *Fat Man* or the *Transplant*, showing a tendency to take the passive approach. In impersonal scenarios, like the *Bystander at the Switch* version of the Trolley Problem, the answers were based on reasoning and showed a tendency toward the active approach.

Besides different narratives, several factors have been reported to influence changes in people's reactions to sacrificial moral dilemmas, including culture (Ahlenius and Tännsjö 2012; Gold et al. 2014a; Rehman, Dzionek-Kozlowska 2020; Bago et al. 2022; Andrade 2023; Xu et al. 2024), personality traits (Nasello et al. 2023a; 2023b), prior experiences (Andrade et al. 2024), and health conditions (Koenigs et al. 2007). Academic education, however, has been rarely investigated as a potential factor. When examined, only a limited range of scientific disciplines were considered, and the empirical evidence gathered so far remains inconclusive.

Academic education influence on students' attitudes and values

The question of the impact of academic education on students' morality has gained attention relatively recently, as for centuries, the number of people privileged to access higher education was so small that they were commonly regarded as constituting not only an intellectual but

also a moral elite of the society. The issue was raised in the 20th century by those concerned that expanding social sciences and humanities created an intellectual environment promoting liberal and leftist attitudes, progressivism and moral relativism (Bloom 1987; cf. Gross 2013; Williams 2016). Broadening access to higher education was once seen as a serious threat to the traditional social order, with concerns primarily focusing on sociopolitical implications. However, ethical considerations were also raised. The moral dimension became even more prominent when moral foundation theorists showed that people's political attitudes are deeply rooted in their core ethical framework (Haidt 2012).

The subsequent discussion revolved around two main channels of potential impact. The *cognitive hypothesis* highlighted that students' training in handling multidimensional phenomena and abstract thinking develops cognitive abilities that help them understand the complexity of ethical systems and promote acceptance of liberal values (Adorno et al. 1950; Jost et al. 2003). The *socialisation hypothesis* suggested that students' morality may shift toward liberal values due to exposure to the "progressive and relativistic culture" of liberal arts, humanities, and social sciences departments (Weil 1985; Sidanius et al. 2003). Empirical research was however focused on the sociopolitical rather than ethical dimension. An exception is a study by Broćić and Miles (2021), who found that arts, humanities and social sciences curricula raise moral concern for others but, surprisingly, tend to support moral absolutism rather than relativism. The same effect was also present for other university programs, however, to a lesser extent.

Studies on moral attitudes and judgments have typically been conducted with reference to representatives of a selected academic discipline, comparing their results with one or two groups of students from other disciplines or with a group of students from fields different from that under investigation. For example, Livingstone et al. (2006) analyzed the level of moral development among pedagogy students by comparing their results with those of psychology students and students from other disciplines. Ahmed (2008) examined the pro-social attitudes of economics students, humanities students, and police academy cadets. Andel et al. (2016) analyzed the willingness to be an organ donor taken as a proxy for the pro-social attitudes among students of economics, medicine, and psychology. However, the alleged negative effect of economics and business studies has been the most extensively tested. These programs were criticized for focusing on profit maximization, which was seen as potentially fostering calculativeness, egoism, and insensitivity (Frank et al. 1993; Frey, Meier 2005; Bauman, Rose 2011). This wave of research was initiated by Marwell and Ames'

(1981) paper demonstrating the results of the public good game experiments and reporting economics graduates to donate significantly less to the common good than other "players". Numerous other studies confirmed the economists "play" differently (Carter, Irons 1991; Gerlach 2017). Nevertheless, the evidence collected with questionnaires and natural and field experiments is inconclusive (Neubaum et al. 2009; Dzionek-Kozlowska, Rehman 2017), indicating the method of research may influence the results. This debate shows that the problem of finding empirical evidence demonstrating academic education's influence on students' morality is nuanced and complex.

Compared to the wave of empirical research into the influence of economic education on students' attitudes and values, the number of empirical studies facing respondents with the Trolley Problem while examining students' programs of studies is significantly smaller. Christen et al. (2021) compared Air Force cadets' and civilian students' replies to three Trolley-like 3D simulations put in the military contexts yet found no significant differences between both samples. Dzionek-Kozlowska and Rehman (2019) reported that students of sociology were more reluctant to take the active approach in the *Fat Man* scenario than students of economics. However, no difference was observed between the two groups in their responses to the standard Trolley Problem. Dzionek-Kozlowska et al. (2024a) observed a difference among first-year students, with economics students being more likely to take an active („utilitarian") approach than sociology students. This difference disappeared among more advanced students. No statistically significant differences between students of law and economics were reported by Dzionek-Kozłowska and Kobyłecki (2025); however, they observed an inclination towards more deontological choices among the more advanced law students compared to the first-year law students' answers.

The Trolley Problem scenarios were also employed to collect evidence from medical (Andrade et al. 2018) and nursing students (Oftedal et al. 2020). However, these studies did not focus on differences between academic disciplines. Instead, they examined how medical students' responses changed due to exposure to mortality salience and how student nurses reacted to standard trolley problems compared to vaccine-related sacrificial dilemmas.

Research design

As all the reported studies worked with representatives of a limited range of academic programs, they did not provide sufficient evidence for drawing broader conclusions about the correlation between academic

disciplines and students' ethical values. Our study aimed to address this gap by examining a significantly wider sample, including students from humanities, arts, social sciences, medical sciences, and natural sciences.

We used a structured survey to examine moral passive/active attitude across academic disciplines. Participants were presented with the classic moral sacrificial dilemma, i.e., the Trolley Problem, requiring them to choose between two options: (1) taking action to divert a runaway trolley to a different track, sacrificing one person to save five others (active, „utilitarian" response), or (2) refraining from taking action and allowing the trolley to proceed, resulting in the death of five individuals (passive, "deontological" response).

To account for various factors potentially influencing moral passive/active attitude besides academic discipline, participants provided demographic information, including gender, age, employment status, and place of residence. Respondents were also asked whether they had received formal economic education to explore its potential relationship with "utilitarian" responses.

The survey was conducted in May and June 2024 at one of the leading academic centres in Poland. The questionnaires were distributed among three higher education institutions: the University of Lodz, with over 23,000 students, the Medical University of Lodz, with over 9,000 students, and the Strzemiński Academy of Fine Arts, with nearly 900 students (Statistics Poland, 2024).

Participation in the study was both voluntary and anonymous. The respondents were informed that there were no "right" or "wrong" answers to the questions included in the questionnaire. The research was conducted in accordance with ethical research guidelines, ensuring participant confidentiality, informed consent, and the right to withdraw at any stage. No personally identifiable information was collected. There was no time limit to fill in the survey. The participants were not compensated for completing the surveys. A pilot test of the instrument was conducted in April 2024 with the members of SSC "Paradigm" at the University of Lodz to ensure the clarity and validity of the questions.

Surveys were administered in academic settings, in and outside classrooms, for offline responses and through secure online platforms for remote participants, who declared unwilling to complete the survey on paper.

Based on previous evidence regarding the impact of economic and business education on students' attitudes, we anticipated that future econ-

omists, having been exposed to the principle of utility maximization during their studies, would be more inclined to make active ("utilitarian") choices. We also expected a positive correlation between participation in economic courses included in a variety of curricula and respondents' active decisions in the Trolley Problem.

Additionally, given medical students' familiarity with sacrificial dilemmas related to human health and life and recognizing of the use of such thought experiments in medical ethics education (cf. Andrade, 2024), we hypothesized that students of medical and health sciences would also adopt the active approach more frequently than other students.

Therefore, the following hypotheses were formulated:

H1: There is a relationship between academic discipline and moral passive/active attitude in the Trolley Problem.

H2: Students of Medical and Health Sciences take an "active" approach more frequently than other students.

H3a: Students of Economics take an "active" approach more frequently than other students.

H3b: Students with prior economic education take an "active" approach more frequently than students without such experiences.

Results

The sample

A total of 1,147 responses were collected, however, the number of usable questionnaires dropped to 1,084 due to data incompleteness. The sample was composed of participants drawn from five academic disciplines: arts, humanities, medical and health sciences, natural sciences, and social sciences. In the humanities, participants were enrolled in fields such as philosophy, history, journalism, linguistics, ethnology, and film studies. Within the medical and health sciences, 48% were enrolled in a unified master's program in medicine, while the remainder were from other health-related studies. The natural sciences were represented by mathematicians, biologists, computer scientists, econometricians, and data analysts. The social sciences discipline was the largest group, encompassing multiple subfields, including economics, law, finance, sociology, pedagogy, international and political studies, national security, psychology, and management. Table 1 presents the demographics of the respondents.

Table 1. Participants' Demographics (N = 1,084)

	N	%
1	*2*	*3*
Gender		
Male	689	63.6
Female	387	35.7
Undisclosed	8	0.7
Age		
17–19	269	24.8
20–22	609	56.2
23–25	187	17.3
26–40	19	1.8
Place of residence		
City with over 500k inhabitants	517	47.7
City with 100k to 500k inhabitants	80	7.4
City with less than 100k inhabitants	221	20.4
Village	266	24.5
Employment status		
Not working and not looking for work	298	27.5
Not working but looking for work	282	26.0
Working part-time/seasonal	397	36.6
Working full-time	42	3.9
Undisclosed	65	6.0
Prior economic education		
Yes	760	70.1
No	324	29.9
Academic discipline		
Arts	69	6.4
Humanities	67	6.2

1	*2*	*3*
Medical and Health Sciences	113	10.4
Natural Sciences	95	8.8
Social Sciences	740	68.3
Economics	101	9.3
Finance	222	20.5
Law	74	6.8
National Security and Military Studies	27	2.5
Pedagogy	69	6.4
Sociology	59	5.4
Other	188	17.3

The Findings

The starting point for drawing conclusions from the collected empirical material was the distribution of active and passive responses obtained for the entire sample. In our sample, 358 respondents (33%) declared that they would refrain from switching the lever, while 726 (67%) claimed they would pull the lever to save five workers at the cost of sacrificing one.

The key finding of our study is that the analysis of the relationship between academic discipline and responses to the Trolley Problem revealed a statistically significant association between respondents' field of study and their response type, $\chi^2(4, N = 1084) = 9.237$, $p = .055$. The highest percentage of participants' declarations to act was exhibited among the students in Medical and Health Sciences (73%), while students in Humanities demonstrated the lowest percentage of active responses (52%). The distribution of responses by academic discipline is shown in Figure 1.

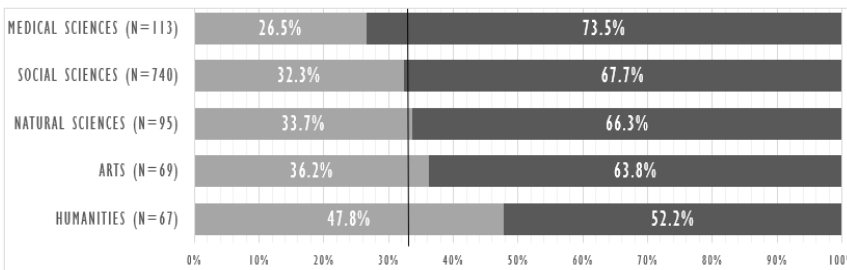

Figure 1. Response Distribution by Academic Discipline

The subsample of Social Sciences respondents demonstrated some internal diversity, with students of Sociology being nearly as reluctant to take an active approach as representatives of Humanities, while students of Pedagogy being even more eager to take such an approach than students of Medical and Health Sciences. The distribution of responses among the five largest Social Sciences programmes included in our study is presented in Fig. 2. The differences between responses of the five Social Sciences disciplines reached over 16 p.p., however, they were statistically insignificant, $\chi^2(4, N = 525) = 5.629$, $p = .229$.

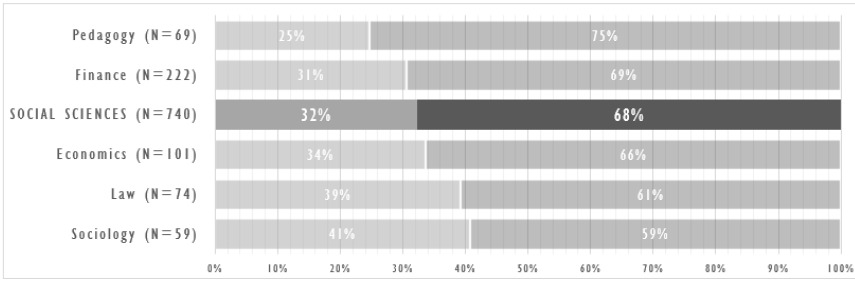

Figure 2. Response Distribution among the largest Social Sciences programs (N > 50)

The highest share of active responses, 89%, was among the students of National Security and Military Studies programs (N = 27), with only three persons from this subsample refraining from choosing to pull the lever.

Neither gender, place of residence, nor employment status influenced the choices. Both males (66.2%) and females (68.7%) demonstrated a similar preference for active responses when faced with the Trolley Problem scenario. The differences between choices made by inhabitants of the more and less populated places was 7.1% and was not statistically significant. The most "active" respondents were not working but looking for work (70.6%), whereas the most "passive" were neither working nor looking for work (36.2%). The difference between subsamples distinguished by the employment status were statistically insignificant. The distribution of responses is presented in Table 2, and the hypotheses are summarised in Table 3.

Table 2. Distribution of respondents' answers across demographic variables

	passive (%)	active (%)	N	χ^2	p
1	*2*	*3*	*4*	*5*	*6*
Gender				0.730	.393
Male	233 (33.8%)	456 (66.2%)	689		
Female	121 (31.3%)	266 (68.7%)	387		
Age				1.729	.631
17–19	87 (32.3%)	182 (67.7%)	269		
20–22	195 (32.0%)	414 (68.0%)	609		
23–25	69 (36.9%)	118 (63.1%)	187		
26–40	7 (36.8%)	12 (63.2%)	19		
Place of residence				1.426	.699
City with over 500k inhabitants	171 (33.1%)	346 (66.9%)	517		
City with 100k to 500k inhabitants	31 (38.8%)	49 (61.3%)	80		
City with less than 100k inhabitants	70 (31.7%)	151 (68.3%)	221		
Village	86 (32.3%)	180 (67.7%)	266		
Employment status				3.407	.333
Not working and not looking for work	108 (36.2%)	190 (63.8%)	298		
Not working but looking for work	83 (29.4%)	199 (70.6%)	282		
Working part-time/seasonal	126 (31.7%)	271 (68.3%)	397		
Working full-time	15 (35.7%)	27 (64.3%)	42		

1	*2*	*3*	*4*	*5*	*6*
Prior economic education				3.407	.397
Yes	257 (33.8%)	503 (66.2%)	760		
No	101 (31.2%)	223 (68.8%)	324		

Table 3. Summary of research hypotheses

Hypothesis		χ^2	p
H1	There is a relationship between academic discipline and moral passive/active attitude in the Trolley Problem	9.237	.055**
H2	Students of Medical and Health Sciences take the "active" approach more frequently than other students	2.393	.122
H3a	Students of Economics take an "active" approach more frequently than other students	0.007	.936
H3b	Students with prior economic education take the "active" approach more frequently than students without such experiences	3.407	.397

Discussion

Why are medical and health sciences as well as military and national security students less reluctant to pull the lever in the Trolley Problem compared to the other students, whereas students of Economics are not? Considering voluminous research indicating that the narrative plays a significant role in respondents' reactions to ethical dilemmas (cf. Gold et al. 2014b), we suppose the key factor explaining our findings is the relative proximity of the Trolley Problem scenario to decisions made by medical and national security professionals in their real-life practice. In both domains, one is in a position to deal with human life and health in a direct way, which is rather untypical in the other examined fields. Almost all political, judicial, or economic decisions benefit some parties while bearing negative consequences for others, and Pareto optimality is hardly ever reachable in real social life. Nevertheless, court rulings, journal articles, choices about what to produce and what to buy, and myriads of other decisions that constitute our social activities and may affect people's lives are not seen as ultimate life-and-death verdicts. The

parallel between the Trolley Problem scenario and everyday decisions taken in, say, the economy is much further than the parallel between the Trolley Problem and medical and national security practice. Medical professionals repeatedly face situations where the link between their decision-making and patients' lives and health is much more tangible. In addition, to prepare them better to bear such responsibility, medical and health sciences students are often trained to deal with sacrificial dilemmas, which are discussed during their medical ethics classes (cf. Andrade 2024). Without any additional information about people involved in the Trolley Problem situation, the decision to act to save as many people as possible could be regarded as ethically correct from both medical and national security perspectives. It is a fact that the Trolley Problem is also frequently examined in Philosophy, Ethics, and Psychology academic courses. Yet, in those cases, it is used as a starting point to discuss the intricacies of ethical doctrines and conundrums of moral reasoning and not to provide a tool to initiate a discussion about what should have been done if one faces a similar situation. Thus, the Trolley Problem narrative remains a thought experiment, a highly unrealistic ethical dilemma that bears little resemblance to situations they may encounter in real life.

Would then the economists and perhaps other social sciences students decide differently if, instead of killing a person, the sacrifice would have referred to property loss? We may suppose such a difference in the narrative would affect the results. Gold et al. (2013) reported a higher percentage of active choices when, instead of sacrificing a person's life, the running trolley could have caused limb loss, broken bones, bruising and damage to rucksacks with personal belongings left on the tracks. The differences between the standard Trolley Problem and the one with property loss were statistically insignificant, yet the share of active choices in the property-based cases was systematically higher than in those related to death.

Drawing from Greene et al. (2001; 2004) and other studies (Paxton et al., 2012; Patil et al., 2021), we could also perceive the tendency to make active choices as a result of respondents' preference towards reflective or analytic cognitive style, while intuitive and emotional reactions seem to promote passive choices (cf. Bartels, 2008). However, to use such an argument to explain our findings, we would need to examine a link between reasoning styles and students' choices of disciplines they intend to study.

Compared to results of other research confronting respondents with the standard version of the Trolley Problem, our study confirm students of economics are more likely to act than students of sociology (cf. Dzionek-Kozlowska et al. 2024a), and students of medical and health sciences demonstrate strong preference towards the active ("utilitarian") option. Compared to respondents from other studies, Polish medical stu-

dents appeared relatively "passive"—73.5% chose to pull the lever, whereas Andrade et al. (2018) reported 83% of Canadian and American medical students making the same choice, and Oftendal et al. (2020) found as many as 92.3% of nursing specialist students at Oslo Metropolitan University willing to sacrifice one person on the side track to save five. However, it must be noted that the pattern of responses in the entire present sample, with 67% of respondents declaring to pull the lever, diverges from the distribution frequently reported by other researchers. Typically, in the standard Trolley Problem scenario, acceptance of the active choice is significantly higher, reaching over 85% (cf. Hauser et al. 2007; Gold et al. 2013). Our result closely corresponds to the outcomes of earlier studies conducted with Polish students, where the acceptance rate equalled 64% (Dzionek-Kozlowska et al., 2024a) and 60% (Dzionek-Kozlowska et al., 2024b; Dzionek-Kozłowska, Kobyłecki 2025). Interestingly, it also mirrors recent findings by Xu et al. (2024) for American respondents (the Chinese sample examined in this study was even more "passive", with only 57% of respondents declaring to choose the active option). This result is, however, at odds with the findings of numerous other studies conducted with American samples (cf. Hauser et al. 2007; Ahlenius, Tännsjö 2012). Considering studies with non-WEIRD populations, which show that culture plays a significant role in response patterns, we assume the difference between the present and earlier studies stems from culture-related factors.

Conclusions

The differences we found in student responses to the Trolley Problem across academic disciplines suggest that ethical decisions are affected by academic education. In certain fields, such as medical and health sciences and national security—where life-and-death decisions are integral to the profession—individuals become more accustomed to evaluating dilemmas through the lens of group survival. This perspective often leads to viewing active intervention in a sacrificial ethical dilemmas as the ethically appropriate choice. Although utility maximization underpins rational choice theory and serves as a core of economic education, it does not necessarily make Economics students more inclined toward active ("utilitarian") decisions in moral dilemmas involving human lives rather than economic outcomes. Thus, our study reinforces the idea that academic education may influence students' ethical choices. However, this resonance seems to manifest itself in contexts that align closely with the decision-making frameworks relevant to one's field of study.

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