



Social dominance orientation predicts civil and military intelligence analysts' utilitarian responses to ethics-of-intelligence dilemmas

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Abstract

What is the real ethical framework of an intelligence analyst? We addressed this question by presenting a group of civil and military intelligence analysts ($N=41$), and a control group of non-professionals ($N=41$), with a set of dilemmas depicting intelligence agents facing the decision whether to violate a deontological rule where that would benefit their work (ethics-of-intelligence dilemmas). Participants judged how much violating the rule was acceptable. Next, we measured participants' individual differences in social dominance orientation (using the Social Dominance Orientation scale which measures the proclivity to endorse intergroup hierarchy and anti-egalitarianism), their deontological and utilitarian response tendencies (using classical moral dilemmas), and how much they value rule conformity, traditions, and safety and stability in the society (using the Value Survey). A multiple regression analysis revealed that, among all the factors, only social dominance significantly helped explain variability in intelligence analysts' but not non-professionals' resolutions of the ethics-of-intelligence dilemmas. Specifically, social dominance positively predicted the tendency to judge violating the deontological rule acceptable, possibly suggesting that analysts who show a stronger proclivity to desire their country or company to prevail over others are also more lenient toward deontological violations if these result in a greater good for the state or the company. For the first time in the open literature, we elucidated some key aspects of the real ethics of intelligence.

Keywords Intelligence · Military intelligence · Social dominance · Morality · Utilitarianism

Societies, institutions, and political organizations constantly face threats to their own security. These can be posed by other societies, states, or terrorist organizations. Civil and military intelligence functions pursued by appropriate agencies are meant to fight back and protect from hostile countries, organizations or individuals (Goldman, 2006a). Specifically, intelligence is aimed to foresee enemy's intentions, behavior and capability (Gill & Phythian, 2012, 2016; Horn, 2003; Warner, 2002). The intelligence outcome is forwarded to the decision makers to inform them about the enemy. Thus, intelligence analysts work to produce a wide array of analyses and assessments of facts

on the ground, from geopolitical scenarios to technical evaluations (e.g., nuclear explosions, missile tests, piracy activity). They seek to process the gathered information into an intelligence product, which is a particular kind of informational product, usually a report and/or an oral debriefing.

However, whereas this knowledge is often meant for the public benefit, the ordinary citizen cannot have access to it. Indeed, intelligence is secret in at least two fundamental ways: its *process* is secret as it is its *outcome* (Pili, 2019). Moreover, intelligence can be regarded as a particularly valuable source of information because it can prevent harm to citizens but also because, if disclosed, can sometimes return a more truthful version of the facts (historical events for instance). We can further consider that intelligence analysts are citizens too, and sometimes have duties whose fulfillment may come into conflict with their deontological beliefs as analysts. For instance, they can be researchers in academia, students or professors, interested in disseminating knowledge to a large audience.

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Ethical Dilemmas for the Intelligence Professionals

The few facts above mentioned can already generate ethical dilemmas for intelligence professionals (Omand & Phythian, 2018). Indeed, analysts have deontological duties that, if unfulfilled, can cause extreme personal and professional consequences. For example, with respect to the treatment of classified information and leaked documents, they sometimes can be students enrolled in university courses, professors and academic researchers (Gearon, 2020; Goldman, 2013, 2018; see also Barna, 2014; Goodman & Omand, 2018). Within this scenario, it is possible to ask to what extent they should adhere to deontological principles rather than prioritize their duties as citizen-students or academics.

Let us imagine that a former intelligence professional deployed in Vietnam during the war is now an academic hired in a university, and she is asked to prepare a course and publish a paper presenting the history of intelligence in Vietnam. Imagine that she realizes that the open sources do not fully cover some crucial events that she is aware of because of her past activity. To what extent shall this person use classified information in her possession to properly cover her duties as an academic and offer a truthful and meaningful explanation of what happened during the war? Here we can appreciate how sometimes deontological concerns (e.g., classified information should not be publicly available) conflict with concerns for the benefit of the state (e.g., using relevant information would offer to the ordinary citizen a more truthful version of what happened in Vietnam).

The benefit of violating the professional ethics can also be for the purposes of the intelligence mission itself. Let us imagine an intelligence analyst working for a U.S. agency who is unable to retrieve a relevant piece of information from the Intelligence Community. This information is actually leaked and released in a neo-Wikileaks, and he can easily access it from his laptop at home. Should he use the leaked information, knowing that such a practice would not be allowed? In a way, here, as in other cases, we have a dilemma that can be solved either in favor of strictly respecting the deontological rules of the analyst profession or in favor of a more utilitarian reasoning that would lead to violate the deontological rule to eventually serve the state (disseminate truthful information or better protect from threats to national security).

Social Dominance Perspective

Intelligence analysts can solve these dilemmas in different ways, and individual differences may be present. If they are, what can account for them? Here, we considered

the Social Dominance Orientation (SDO) as a possible relevant factor (Pratto et al., 1994; Sidanius et al., 2016). SDO is the tendency to endorse both group-based social hierarchy and anti-egalitarianism (preference for inequality or opposition toward reducing inequality). Research has reported that SDO is a robust predictor of intergroup attitudes including political and economic conservatism (Dunwoody & McFarland, 2018; Sidanius & Pratto, 1999; Sheehy-Skeffington & Thomsen, 2020) and prejudice against minorities or low status groups (Dru, 2007; Thomsen et al., 2008; Ucar & Özdemir, 2021; Whitley Jr., 1999).

Crucially, SDO has been found to predict intergroup attitudes that enhance rather than reduce disparities between social groups in favor of the dominant groups and the existing hierarchical status quo (Pratto et al., 2006; Thomsen et al., 2010). High SDO individuals tend to think that society is a competitive place, where everyone fights for power, and high status groups have to defend themselves from threats posed by subordinate groups. Especially when individuals are members of the dominant group (as, crucially, could be the case for intelligence analysts), SDO can be related to ingroup favoritism (e.g., Levin et al., 2002). Here, we expect that analysts *high* in SDO will show a weaker tendency to endorse deontological responses to the intelligence dilemmas. Indeed, there is evidence that higher scores in SDO are associated with a decreased preference for deontological resolutions and an increased tendency to violate moral principles to achieve greater desirable goals (Bostyn et al., 2016; Takamatsu, 2019; Wilson, 2003). The desire to protect the state or a company against threats posed by outgroup organizations, or to better serve the state or the company by disseminating useful knowledge, may sometimes be weighed more than respecting deontological rules of one's own profession.

This study is thus uniquely positioned to fill a gap in social dominance research. As of now, only a few studies have investigated the association between SDO and utilitarian or deontological inclinations, where however these inclinations have been shown to be central to human morality (Greene et al., 2001). A first study reported that if high in SDO, one is more likely to endorse utilitarian resolutions precisely because of a decreased preference for deontological resolutions (Bostyn et al., 2016; see also unpublished data reported in Dryburgh, 2014). Next, a second study showed that the effect of SDO on moral judgment is context-sensitive, as SDO was linked to a stronger proclivity to endorse utilitarian resolutions especially when the story protagonist had a high status, being for example the head of a product management team (Takamatsu, 2019).

Thus, a first reason why the current study adds to this strand of research is that it further investigates the link between SDO and moral judgment, and it does so by estimating the extent to which intelligence professionals choose utilitarian resolutions over deontological ones in judging dilemmas pertaining to their own profession. Moreover, whereas a large number of studies have investigated people's moral intuitions by employing fairly abstract, highly hypothetical and sometimes decontextualized sacrificial dilemmas such as the trolley problem (which asks whether you ought to hit a switch and turn a runaway trolley to save five individuals at the expense of one), we used realistic and nuanced scenarios that could actually occur within the *context* of intelligence profession. Therefore, we also moved toward a direction that has been advocated for organizational, social and behavioral research, i.e. incorporating context in research (Johns, 2017).

This latter point is relevant not just in and of itself, but also because studying moral judgment in context here means assessing how SDO is associated with the tendency to endorse utilitarian resolutions when participants who judge scenarios relevant to their profession are arguably in a position of *power*. This is central because research suggests that SDO is related to ingroup favoritism when individuals who are judging belong to the dominant group, where – in the current context – ingroup favoritism can be linked to a preference for utilitarian solutions that put first the interests of the state or agency rather than abstract deontological principles. This study allows us to test whether, especially in the group of intelligence professionals, where participants have a special high status, individual variability in social dominance explains the variability in the tendency to endorse utilitarian resolutions.

Main Aims and Hypotheses of the Current Study

We investigated how real intelligence professionals, and a control group of non-professionals, evaluated acts that would violate a deontological rule of the analyst profession but, at the same time, potentially benefit the state, by either favoring the success of a mission (and thus increase national security, for instance) or fulfilling the duties of dissemination as academics. Whereas an entire field of research is devoted to discuss normative ethics of intelligence, debating issues such as the war on terror, torture, just war theory, data treatment, privacy and others (Floridi & Taddeo, 2014; Gendron, 2005; Goldman, 2006b; Omand & Phythian, 2018), we took a novel descriptive approach to unveil ordinary ethical intuitions of intelligence professionals (though there were other quantitative studies in the intelligence studies, this was the first one on the ethics of intelligence; Arcos & Palacios,

2020; Coulthart, 2016; Johnson & Shelton, 2013). Moreover, assessing the real ethics of intelligence is crucial to bridge the gap between the current state of affairs and the desired ethical standards, being this especially relevant for intelligence education (a point we shall return to).

Participants were presented with dilemmatic scenarios (henceforth, *ethics-of-intelligence dilemmas*) depicting intelligence agents having to decide whether to act and violate a deontological rule of their profession. Violating the rule would result in benefiting their work as either intelligence analysts or academics (e.g., using leaked information to produce intelligence, or classified information in their work as academics). The first aim of this study was to estimate the extent to which intelligence analysts endorse deontological vs. utilitarian resolutions compared to non-professionals. Second, we asked what factors help explain individual differences in the analysts' evaluations of the dilemmas, with a special focus on social dominance orientation.

With respect to group-related differences, whereas, admittedly, we approached the question of how strong deontological or utilitarian inclinations were in professionals without prior assumptions, we reasoned that because of their better insight into intelligence practices (an insight that encompasses being fully aware of the legal consequences of making certain decisions), deontological inclinations toward a cautionary course of action could be stronger in professionals than in non-professionals.

H1. Compared to non-professionals, intelligence analysts show stronger deontological inclinations when resolving ethics-of-intelligence dilemmas.

However, though professionals may be more inclined toward deontological resolutions as a group, for what has been detailed above it may also be true that professionals' individual differences in SDO explain part of the variability in the resolutions of the ethics-of-intelligence dilemmas, so that *high* levels in SDO are associated with utilitarian inclinations.

H2. For analysts, high levels in SDO are associated with utilitarian inclinations.

Further, individual differences in the importance given to safety and stability in the society (e.g., the fact that the country protect itself against all possible threats), cultural, family or religious traditions, and conformity to rules, laws and authority (Value Survey; Schwartz et al., 2012) were measured and hypothesized to contribute to explaining variability in ethical judgments. We reasoned that the analysts who weigh more safety and stability in the society, as well as those who defend the importance of respecting the existing hierarchical status quo, would tend to endorse a utilitarian

resolution. This can be so because violating a deontological rule may be deemed appropriate if ingroup identity and security are in danger, they are judged as particularly valuable, and/or violating the rule can benefit society. By contrast, conformity to rules and authority may lead participants to endorse a deontological resolution, to comply with rules no matter what.

H3. Valuing safety in the society and the existing status quo is positively related to utilitarian inclinations, whereas valuing conformity to rules and authority is positively related to deontological inclinations.

Lastly, because we characterized ethics-of-intelligence dilemmas as eliciting either a deontological or a utilitarian response, we also measured the strength of utilitarian and deontological inclinations of participants using classical moral dilemmas such as killing one person to save five (Conway & Gawronski, 2013; Patil et al., 2020). We predicted that both inclinations would be useful in explaining variability in participants' evaluation of the ethics-of-intelligence dilemmas. We expected deontological resolutions of the ethics-of-intelligence dilemmas to be related positively to general deontological inclinations and negatively to general utilitarian inclinations.

H4. Deontological resolutions of the ethics-of-intelligence dilemmas are related positively to deontological inclinations and negatively to utilitarian inclinations (as revealed by participants' responses to classical moral dilemmas).

Methods

Participants

The sample size was determined by an a priori power analysis for the correlations between participants' evaluations of the ethics-of-intelligence dilemmas, participants' group (professionals, non-professionals), SDO scores and the other predictors (Tables 1 and 2). To detect a medium effect size $\rho = 0.30$ with alpha set at 0.05, a power of 0.80, point biserial model, two-tailed, a minimum total sample size of 82 participants was required.

Forty-one intelligence professionals ($M_{Age} = 40.68$ years, $SD = 14.32$, age range 22-69; 9 female) and 41 non-professionals ($M_{Age} = 40.73$ years, $SD = 13.89$, age range 24-72; 20 female) were recruited. The two groups differed in terms of gender composition, $\chi^2(1, N = 81) = 6.08, p = .014, \phi = 0.27$. However, gender did not significantly predict participants' responses to the ethics-of-intelligence dilemmas, $\beta = -0.01, t(80) = -0.11,$

Table 1 Descriptive statistics (Means, 95% CIs, and possible range) for the measured variables for analysts participants and participants in the control group

| | Analysts | | Control group | | |
|------------------------|----------|-----------|---------------|-----------|-------|
| | M | 95% CI | M | 95% CI | Range |
| Intelligence Dilemmas | 2.90 | 2.53–3.28 | 3.64 | 3.32–3.96 | 1–7 |
| Utilitarianism | 0.35 | 0.27–0.43 | 0.31 | 0.23–0.39 | 0–1 |
| Deontology | 0.85 | 0.77–0.93 | 0.85 | 0.78–0.93 | 0–1 |
| SDO | 2.46 | 2.12–2.80 | 2.05 | 1.73–2.36 | 1–7 |
| Security | 5.47 | 5.12–5.81 | 5.28 | 4.84–5.73 | 1–7 |
| Tradition | 3.42 | 2.91–3.93 | 3.50 | 2.91–4.10 | 1–7 |
| Conformity | 4.56 | 4.12–5.00 | 4.63 | 4.12–5.13 | 1–7 |
| Political Conservatism | 3.54 | 3.20–3.89 | 3.46 | 2.93–4.00 | 1–12 |

SDO Social Dominance Orientation

$p = .909$. Non-professionals had on average 18.27 years of school education, and were Europeans (21), North Americans (13), or Latin Americans (6). Analysts had on average 18.80 years of school education, and the majority of them were either Europeans (18) or North Americans (20). This geographical origin explains their regional expertise. Thus, we note that this study shows Western-world analysts' ethical reasoning, and it cannot be generalized to the rest of the world. After all, the intelligence profession is shaped by political contexts, which are differentiated state-by-state and region-by-region.

Intelligence professionals' main expertise was geopolitics (international politics and economic intelligence; 17), law enforcement (national security, counterintelligence and counterterrorism; 10), military intelligence (defense; 9), cyber intelligence (1), intelligence techniques (2), and other (2). They worked on average 11.03 years as analysts ($SD = 11.27$, range 1-40), 27 of them in the public sector and 14 in the private sector. With respect to geographical expertise, we considered the main two regions for each participant in their own words: Middle East and North Africa (12), East Asia (11), Russia and post-Soviet countries (7), Europe (7), Latin America (6), Africa (4), North Africa (2), USA (2), Global (2), Sub-Saharan Africa (1), Central Africa (1), East Africa (1), South Pacific (1), Iran (1). Lastly, considering the kind of output analysts have to deliver, the great majority of them reported that they have the duty to write down reports on the main subject matter of their expertise. Then, those who stated they work on counterintelligence are asked to write down reports.

Materials and Procedure

Participants completed an on-line survey that took approximately 30 min to be completed, and consisted of the

Table 2 Correlations between each of the measured variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------------------------|-------------|--------------|--------------|-------|--------------|--------------|--------------|--------------|---|
| 1. Group | – | | | | | | | | |
| 2. Intelligence Dilemmas | .33* | – | | | | | | | |
| 3. Utilitarianism | –.05 | .14 | – | | | | | | |
| 4. Deontology | .02 | –.24* | –.26* | – | | | | | |
| 5. SDO | –.19 | .22* | –.06 | –.11 | – | | | | |
| 6. Security | –.10 | –.01 | .17 | –.19 | .18 | – | | | |
| 7. Tradition | < .01 | –.01 | –.13 | < .01 | .37** | .42** | – | | |
| 8. Conformity | < .01 | –.18 | –.12 | .18 | –.05 | .62** | .43** | – | |
| 9. Conservatism | –.03 | .07 | –.13 | .05 | .35* | .42** | .65** | .43** | – |

Group (0 = analysts, 1 = control); SDO = Social Dominance Orientation; * $p < .05$, ** $p \leq .001$

measures listed below (presented in randomized order for each participant). The full survey can be accessed in the [Supplementary Materials](#). We ran confirmatory factor analyses and calculated Cronbach's α to assess the factor structure and estimate the reliability of the additive measures, respectively. Model fit was evaluated using the Tucker–Lewis index (TLI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). These analyses were conducted for all measures except the newly developed set of ethics-of-intelligence dilemmas and the classical moral dilemmas, because these were not explicitly designed to measure latent constructs, and may instead be conceived as formative constructs (Bollen & Lennox, 1991). For the Social Dominance Orientation scale (see below), a two-factor model (considering both group-based dominance and anti-egalitarianism) provided an almost good fit to the data, TLI = .85, CFI = .87 (slightly lower than what reported in prior work, e.g., CFI = .91 in Jost & Thompson, 2000), RMSEA = .11 (.09 - .13). For the Value Survey (see below), a three-factor model provided satisfactory fit to the data, TLI = .99, CFI = .99, RMSEA = .04 (.00 - .10).

Outcome Variable: Ethics-of-Intelligence Dilemmas

Participants read and evaluated seven dilemmas where intelligence professional fictitious characters had to face the decision whether to act and likely violate a deontological rule for the benefit of their work either as intelligence analysts or as university students/professors. After each dilemma, participants judged how much acting and violating the deontological rule was acceptable, using a Likert scale anchored at 1 with *Not at all*, at 4 with *Somewhat*, at 7 with *Very much*. We also asked participants to explain their answers (see the [Supplementary Materials](#) for a qualitative assessment of participants' explanations).

Dilemma 1 asked whether the story protagonist, a signal intelligence analyst for a U.S. agency, being enrolled in a university course, should participate in a class discussion of a recently leaked document he contributed writing.

Dilemma 2 asked whether the story protagonist, a former intelligence officer deployed in Vietnam during the war, now a postdoctoral scholar, should use classified evidence in her possession (historical facts about the war) to fulfill her research duties (writing a paper and preparing a course at the university). Dilemma 3 was a modified version of Dilemma 2, and asked whether the protagonist should use her prior knowledge of intelligence methods in the class.

Dilemma 4 asked whether the story protagonist, an intelligence analyst, should use at his job leaked information accessed at his home that he was unable to receive from the Intelligence Community. Dilemma 5 asked whether the story protagonist, an intelligence analyst who has a daughter whose boyfriend's family is active in drug and financial crimes, while investigating the family should ask for information to her daughter without informing her about the investigation. Dilemma 6 was a modified version of Dilemma 5, and asked whether the mother should ask the daughter to spy knowing that the boy is actually innocent. Lastly, Dilemma 7 asked whether the story protagonist, a CIA agent who believes that there will be another major terrorist attack (9/11 magnitude), without having the legal permission, should spy the private sexual life of a suspected informer of Al-Qaeda.

Dilemmas 1 and 4 were slightly modified versions of dilemmas developed by Goldman (2018). The remaining ones were developed mostly by relying on the second author's experience as lecturer in *Intelligence Analysis*. Each dilemma was meant to elicit a conflict between a deontological resolution (i.e. the story protagonist should not act and, for instance, discuss or use leaked information) and a utilitarian resolution favoring the maximization of the outcomes (i.e. violating the deontological rule would likely benefit the story protagonist's work at the university, in Dilemmas 1-3, or increase the likelihood of success of his/her work as intelligence analyst, in Dilemmas 4-7).

Here, a utilitarian resolution would immediately favor the research community and/or the welfare of the society at

large. By contrast, a deontological resolution would likely be driven by concerns about rule compliance and the need to adhere to deontological beliefs. However, please note that participants' responses can only be loosely defined as deontological or utilitarian. Indeed, a deontological resolution too could be driven by the reasoning that strictly adhering to the deontological ethics of the intelligence research and practice will result in favoring the society at large. Thus, we draw the distinction between utilitarian and deontological resolutions by keeping this important caveat in mind. Moreover, the use of these terms will refer mainly to the type of answer (utilitarian = the story protagonist should act; deontological = the story protagonist should not act), thus will not refer to the in reality unknown motivations that led participants to their answers.

Social Dominance Orientation

Participants were administered the Social Dominance Orientation scale (Pratto et al., 1994), measuring individual preferences for hierarchy and inequality among social groups. Precisely, SDO is defined as "the general desire to establish and maintain hierarchically structured intergroup relations regardless of the position of one's own group(s) within this hierarchy" (Sidanius et al., 2016, p. 152; see also Klepeštø et al., 2020). At the individual level, SDO can be measured by the SDO scale consisting of 16 statements, such as "Inferior groups should stay in their place" or "Some groups of people are just more worthy than others" (Ho et al., 2015). For each item, participants indicated the degree of their agreement using a 7-point Likert scale (1 = *Strongly disagree/disapprove*, 7 = *Strongly agree/favor*). Higher scores indicate stronger levels of social dominance orientation. In this study, the reliability of the scale was good, Cronbach's $\alpha = .90$, 95% CI (.86 - .93).

Value Survey: Security-Societal, Tradition, Conformity-Rules

Participants were also presented with three subscales of the Value Survey (Schwartz et al., 2012) assessing the following 'values': security-societal, tradition, and conformity-rules. For each of them, participants read three items and had to say how much the person in the description is or is not like them using a Likert scale ranging from 1 (*completely not like me*) to 7 (*completely like me*). Societal security emphasizes concerns for safety and stability in the society and state (e.g., "It is important to him/her that his/her country protect itself against all threats"). Tradition emphasizes attention for cultural, family or religious traditions (e.g., "It is important to him/her to maintain traditional values or beliefs"). Conformity to rules emphasizes compliance with rules, laws and authority (e.g., "He/she believes he/she should always do what people in authority say"). Items were presented

in a randomized order. In this study, the reliability of the three subscales was good, Cronbach's $\alpha = .75$ (.64 - .83) for security-societal, $\alpha = .87$ (.82 - .91) for tradition, and $\alpha = .78$ (.68 - .85) for conformity-rules.

Utilitarian vs. Deontological General Inclinations

We used the Process Dissociation (PD) approach with which it is possible to assess the strength of each participant's utilitarian as well as deontological inclinations in moral decision-making (Conway & Gawronski, 2013). PD relies on the comparison between incongruent dilemmas, where the two processes (utilitarian, deontological) lead to different responses, and congruent dilemmas, where the two processes lead to the same response. Participants were presented with five pairs of incongruent and congruent classical moral dilemmas (selected among those in Conway & Gawronski, 2013). For instance, in its incongruent variant one dilemma asked participants whether it is appropriate to smother a child in order to save yourself and the other townspeople from being *killed*, whereas in its congruent variant it asked whether it is appropriate to do so to save yourself and the other townspeople from being *captured* by enemy soldiers. By comparing responses on incongruent variants to those on congruent variants, it is possible to dissociate the processes and obtain for each participant one score reflecting their tendency to endorse a utilitarian resolution and another reflecting their tendency to endorse a deontological resolution.

Political Conservatism

Participants were asked to place their political views on a 12-point scale ranging from 1 (*extremely liberal*) to 12 (*extremely conservative*) (Feldman & Stenner, 1997).

Data Analysis Plan

In what follows, we will start by presenting the descriptive statistics (means and 95% CIs) computed for each variable. An ANOVA with group (analysts, control) as a between-subjects factor will be conducted for each variable to reveal possible group differences and inform subsequent analyses. Crucially, at this stage we will already assess whether the two groups differ in the outcome variable, which is the tendency to endorse a deontological resolution on the ethics-of-intelligence dilemmas (Hypothesis 1). Next, we will calculate the correlations between our outcome variable and each of the predictors, and proceed to estimate the contribution of each predictor on the outcome variable using a multiple regression analysis. We will first run a model with all the participants, and all the variables and group (analysts, control) as

Table 3 Multiple regression predicting responses to ethics-of-intelligence dilemmas

| | B (95% CI) | β | T | <i>p</i> |
|----------------|--------------------|---------|-------|----------|
| Group | 0.91 (0.43–1.38) | .41 | 3.83 | < .001 |
| Utilitarianism | 0.71 (–0.31–1.73) | .16 | 1.39 | .171 |
| Deontology | –0.65 (–1.74–0.45) | –.14 | –1.18 | .242 |
| SDO | 0.29 (0.02–0.56) | .26 | 2.15 | .035 |
| Security | –0.03 (–0.31–0.25) | –.03 | –0.20 | .841 |
| Tradition | –0.11 (–0.30–0.08) | –.17 | –1.18 | .244 |
| Conformity | –0.09 (–0.33–0.15) | –.12 | –0.78 | .437 |
| Conservatism | 0.15 (–0.07–0.38) | .20 | 1.34 | .183 |

Group (0=analysts, 1=control); SDO=Social Dominance Orientation

predictors, and then two multiple regression analyses, one for each group, to assess the contribution of each predictor on professionals and non-professionals separately, thus fully testing Hypotheses 1-4. The raw data are available from the corresponding author upon reasonable request.

Results

Group Differences

Table 1 reports means and 95% CIs for all the variables included in the study for each group (analysts, control). A series of ANOVAs revealed that groups differed only in their responses to the ethics-of-intelligence dilemmas, $F(1, 81) = 9.57, p = .003$. On average, compared to non-professionals, analysts gave more deontological responses, overall judging that the story protagonist’s action was between not at all and somewhat acceptable.

Next, we calculated point-biserial correlations between the responses to the ethics-of-intelligence dilemmas and

each of the other variables (Table 2). These responses were significantly positively correlated with participants’ group (0 = analyst, 1 = control) and social dominance, and significantly negatively correlated with deontological inclination as revealed by decision-making in the classical moral dilemmas.

To assess the contribution of each predictor on the responses to the ethics-of-intelligence dilemmas, a multiple regression analysis was conducted. Variables inserted and results are presented in Table 3. Overall, the model accounted for 28.1% of the variance in the responses to the dilemmas, $F(8, 75) = 3.27, p = .003$. However, only participants’ group and SDO scores were found to be significant predictors.

The Contribution of SDO Separately for Group

Having found that group predicted participants’ responses to the ethics-of-intelligence dilemmas, we conducted two separate multiple regression analyses, one for each group. Results are presented in Table 4. Whereas responses in the control group were not significantly predicted by any of the variables included in the model, $R^2 = .14, F(7, 33) = 0.77, p = .619$, intelligence analysts’ responses were predicted by SDO and Tradition scores. In this latter model, we inserted as predictors also the number of years spent working as intelligence analyst and the sector (public, private). Overall, the model accounted for 44.3% of the variance in the analysts’ responses to the dilemmas, $F(9, 24) = 2.12, p = .068$.

Figure 1 shows that for the analysts, higher SDO scores were associated with a greater tendency to provide a utilitarian resolution to the ethics-of-intelligence dilemmas. A linear regression with SDO as the only independent variable and responses to dilemmas as the outcome variable confirmed this result, $B = 0.44 (0.11, 0.77), \beta = .40, t(38) = 2.67, p = .011$. Instead, the predictive relationship found between Tradition scores and responses to the dilemmas may be explained by

Table 4 Multiple regressions predicting responses to ethics-of-intelligence dilemmas separated by participants’ group (analysts, control)

| | Analysts group | | | | Control group | | | |
|----------------|--------------------|---------|-------|----------|--------------------|---------|-------|----------|
| | B (95% CI) | β | T | <i>p</i> | B (95% CI) | β | T | <i>p</i> |
| Utilitarianism | 0.58 (–1.14–2.31) | .13 | 0.70 | .493 | 0.37 (–1.11–1.85) | .10 | 0.51 | .613 |
| Deontology | –0.42 (–2.11–1.27) | –.09 | –0.52 | .611 | –0.98 (–2.68–0.72) | –.23 | –1.17 | .249 |
| SDO | 0.54 (0.09–0.98) | .49 | 2.50 | .020 | 0.13 (–0.26–0.51) | .12 | 0.67 | .507 |
| Security | 0.06 (–0.45–0.57) | .06 | 0.25 | .805 | –0.04 (–0.43–0.34) | –.06 | –0.23 | .823 |
| Tradition | –0.41 (–0.75–0.06) | –.52 | –2.42 | .023 | 0.01 (–0.28–0.29) | .01 | 0.05 | .958 |
| Conformity | –0.17 (–0.57–0.23) | –.20 | –0.87 | .393 | –0.10 (–0.46–0.27) | –.15 | –0.54 | .590 |
| Conservatism | 0.34 (–0.14–0.82) | .32 | 1.47 | .154 | 0.10 (–0.19–0.40) | .17 | 0.70 | .486 |
| Years Analyst | –0.01 (–0.05–0.02) | –.12 | –0.68 | .505 | – | – | – | – |
| Sector | 0.78 (–0.03–1.58) | .35 | 2.00 | .057 | – | – | – | – |

Group (0=analysts, 1=control); SDO=Social Dominance Orientation; Sector (0=public, 1=private)

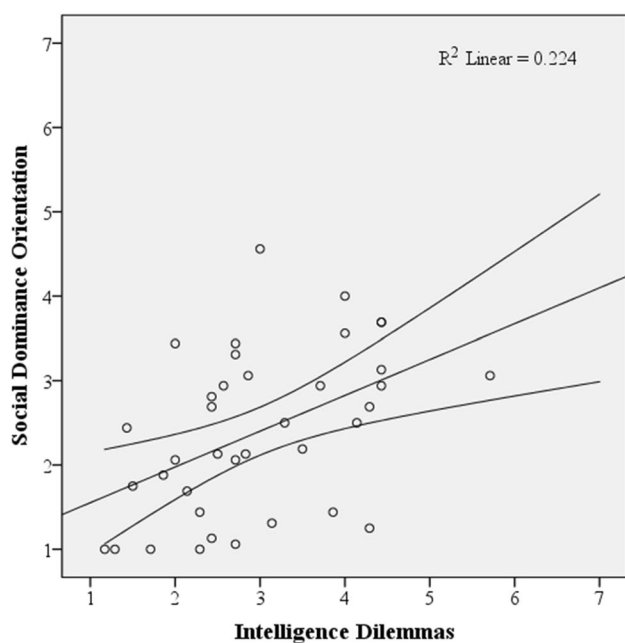


Fig. 1 Analysts' responses to the ethics-of-intelligence dilemmas (1 = action not at all permitted, 7 = action very much permitted) as a function of SDO scores (1 = strong aversion to hierarchy and inequality among social groups, 7 = strong preference for hierarchy and inequality)

the fact that Tradition scores, though not significantly correlated with responses to dilemmas, $r = -.06$, were highly correlated with SDO, $r = .49$, $p = .002$. This line of reasoning is confirmed by the fact that if inserted as the only predictor in a linear regression analysis, Tradition scores do not significantly predict analysts' responses to the dilemmas, $B = -0.04$ (-0.29 , 0.21), $\beta = -.06$, $t(37) = -0.33$, $p = .743$.

Discussion

The present study investigated how real intelligence analysts respond to ethics-of-intelligence dilemmas, that is, depicted situations where the story's protagonist, an intelligence analyst, has to decide whether to violate a deontological rule for the benefit of his/her work either as an intelligence agent or as academic. On average, professionals judged violating a deontological rule (e.g., using leaked information to produce intelligence without formal permission) close to 'somewhat' acceptable, but still significantly less acceptable compared to the control group of non-professionals. Moreover, we found that analysts' resolutions of ethics-of-intelligence dilemmas were predicted by SDO scores. Specifically, analysts high in SDO tended to judge the utilitarian resolution more acceptable. No other variables were found to be useful in explaining variability in participants' answers to the ethics-of-intelligence dilemmas.

Theoretical Contribution: Social Dominance and Ethics of Intelligence

Whereas SDO scores predicted resolutions of ethics-of-intelligence dilemmas in the professional group but not in the control group, the two groups did not differ in their average SDO level. It could be worth noting that both groups had an average score between 2 and 2.5, which is close to the average SDO score reported in the validation study of the scale that is 2.6 (Ho et al., 2015; see also Fischer et al., 2012). Although SDO scores can range between 1 and 7 with a midpoint of 4, in reality they tend to be skewed toward the lower end of the scale. Therefore, because a score around 2.6 can be interpreted as representing neither strong opposition nor strong endorsement of intergroup hierarchy and anti-egalitarianism, we can start by noting that both our samples were not characterized as strongly in favor or opposed more than average to intergroup hierarchy and anti-egalitarianism.

Still, SDO scores helped explain a significant amount of variability in analysts' responses to the ethics-of-intelligence dilemmas. In line with prior work and our predictions, being more social dominance oriented was associated with having the tendency to think that sometimes violating deontological rules can be deemed acceptable and ought to be done (Bostyn et al., 2016; Takamatsu, 2019; Wilson, 2003). In other words, the more the person endorses intergroup hierarchy and anti-egalitarianism, the more he/she also thinks that, for instance, a former intelligence officer, now a scholar, should use classified evidence in her possession to fulfill her research duties, or that an intelligence analyst should use at his job leaked information accessed at his home which he was unable to retrieve from the Intelligence Community, or, again, illegally spy the private sexual life of a veteran soldier who is a suspected informer of Al-Qaeda.

SDO reflects how much a person endorses intergroup hierarchy, the desire for existing dominant groups to have more status and power than subordinate groups, but does not necessarily reflect ingroup favoritism, which is the desire that one's own group dominates others. However, there is evidence that SDO can be positively associated with ingroup favoritism among individuals that belong to dominant groups (Levin et al., 2002; Sidanius et al., 2016; Sidanius & Pratto, 1999; Thomsen et al., 2010). Although with some caveats, we can reasonably argue that intelligence analysts belong to a dominant group or hold high positions within the social hierarchy. Moreover, please recall that SDO can be associated with concerns for the security of the dominant group (e.g., one's country) especially when security is threatened by outgroups (e.g., Cohrs et al., 2005).

Taken together with these observations, the predictive relation between SDO and utilitarian inclinations as revealed by the responses to the ethics-of-intelligence dilemmas suggests that, within the intelligence analyst group, those who

were more prone to desire their country or ingroup to prevail over others were also those who were more readily lenient toward possible violations of deontological rules when these violations can result in a greater good for their state/company or the success of a mission. Thus, SDO may be linked to prioritizing a utilitarian resolution of the dilemmas rather than a deontological one.

In sum, these findings extend prior work showing that individuals high in SDO display a stronger proclivity to reason that the end could justify the means, even when the means entail harming others (Bostyn et al., 2016; Takamatsu, 2019), a result not surprising if we consider that SDO has been associated with a dog-eat-dog worldview and attitude (Duckitt, 2001). Moreover, in the current study we specifically focused on intelligence analysts, developing a set of ethical dilemmas tailored to their profession. Therefore, our findings also bear relevance for the ethics of intelligence debate (e.g., Omand & Phythian, 2013) and for paving the way to a detailed and quantitative investigation of the real ethics of intelligence. This kind of work would ultimately prove useful in informing educational programs aimed at training future intelligence professionals according to the desired standards.

Practical Implications

Intelligence ethics is one of the core topics of almost all intelligence courses at bachelor's and master's level. As a new field, intelligence studies still has many open problems, both practical and theoretical. Intelligence education catches both perfectly. The vast majority of the literature on intelligence ethics available, which is also the baseline for the teachings, is about standards and, more broadly, about disentangling the tension between the *raison d'état* (the necessity of spying and the use of a wide array of techniques) and a stricter morality. This aspect is particularly crucial within democratic nations, which have particular problems in justifying practices that are not always moral, to say the least. For this very reason, the ethics of intelligence is so crucial and, at the same time, explored mainly from a normative perspective. However, detailed, though tentative, quantitative research would be equally crucial to rethink the field.

It is possible to readdress the teaching of intelligence, by suspending the normative judgment and looking at how intelligence professionals really think compared to ordinary people, to take a closer look at reality as reality presents itself. First, knowing the influence of the SDO factor, lecturers and educators can focus their attention on exploring ethical standards that, possibly, can rebalance its effects. Second, they can strengthen their programs through a direct testing of the students' reactions to the dilemmas used in the current study as well as others before and after the course. In this way, they would be provided with both a way to assess their

own educational impact and a way to stimulate the debate in class by comparing how students approach, resolve and disentangle dilemmas to how intelligence professionals with years of experience do it.

Limitations

At least two important limitations should be taken into account when interpreting the results of the present study. First, given the difficulty of recruiting real intelligence analysts, the sample size of this study yields relatively low statistical power to detect a range of effects that otherwise would have been of potential interest, and, to some extent, it undermines the robustness and replicability of the findings. Second, the professionals recruited for the study belonged to a somewhat heterogeneous group. Some of them were working in the private sector, whereas others were working in the public sector. Some had only a few years of experience, whereas others had decades of experience. Moreover, their regional expertise as well as their main expertise varied quite substantially depending on the individual. Though we believe that an initial investigation of the topic could not have easily controlled for all these factors, future research could take them into account to estimate the degree to which the current results are generalizable across different categories of intelligence professionals.

Directions for Future Research

In the current study, the first of this kind that we are aware of in the open literature, we explored some aspects of the ethics of intelligence analysts. Needless to say, that was just a drop in the bucket, and many interesting aspects remain to be uncovered. For instance, a valuable avenue for future research would be to investigate how being an analyst can modify one's intuitions about key notions of authority, social power, justice, war, knowledge, and in general morality in the context of the intelligence process. This research may usefully inform the current debate within intelligence community about the definition of the moral boundaries related to the intelligence process (Goldman, 2013, 2018; Erskine, 2004; Herman, 2004; Petrauskaitė & Šaltenis, 2018; Pili, 2018; Quinlan, 2007). Another fruitful direction could be to investigate whether there are significant differences among intelligence agencies, where the question is whether the culture of the specific institution shapes the intelligence analysts' morality and perception (this point was suggested to one of the authors by Joseph Hatfield, US Naval War College & Intelligence Professional).

Lastly, the perhaps most fascinating direction would be to investigate the conditions of 'moral acceptability' of treason. Indeed, the most dangerous possibility is that the intelligence professionals break the oath to pursue

their own interest. Though betrayal is definitely the worst offence, this is not something we considered in this study because it would have meant depicting the analysts as traitors, which was an option beyond our scope. However, this would be an extremely important topic to explore because it is *likely* that the agencies already inquired over the conditions that trigger the worst possible damage and offence. Yet, as far as we know, this is still something specific to each agency and not released to the open literature.

Conclusion

In conclusion, we assessed how intelligence analysts see their own professional ethics and found that social dominance orientation predicts the tendency to endorse a utilitarian resolution to the ethics-of-intelligence dilemmas. Our study employed a quantitative methodological approach in order to elucidate some key aspects of the real ethics of intelligence.

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Data availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethics approval The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments. The study, however, did not involve any substantial ethical issues, as participants were simply requested to respond to an on-line questionnaire that was fully anonymized. Informed consent was requested before participation.

Consent for publication The authors of this study agree to the submission of this article.

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