



Research article

Effect of professional expertise and exposure to everyday life decision-making on moral choices



Maddalena Boccia^{a,b,*}, Paola Verde^c, Gregorio Angelino^c, Paolo Carrozzo^c, Diego Vecchi^c, Laura Piccardi^{b,d}, Stefano Colangeli^a, Pierluigi Cordellieri^a, Fabio Ferlazzo^a, Anna Maria Giannini^a

^a Department of Psychology, "Sapienza" University of Rome, Italy

^b Neuropsychology Unit, IRCCS Fondazione Santa Lucia of Rome, Italy

^c Italian Air Force Experimental Flight Centre, Aerospace Medicine Department, Pratica di Mare, Italy

^d Department of Life, Health and Environmental Sciences, L'Aquila University, L'Aquila, Italy

HIGHLIGHTS

- Pilots (P) and controls (C) were asked to solve moral dilemmas.
- Military experience affects moral dilemmas in females P.
- Gender differences in moral judgment were not observed in P.
- P rated as more morally acceptable utilitarian responses than C.

ARTICLE INFO

Article history:

Received 14 April 2017

Received in revised form 17 June 2017

Accepted 20 June 2017

Available online 21 June 2017

Keywords:

Moral judgment

Moral dilemmas

Moral decision-making

Pilot

Military personnel

Flight experience

Gender differences

ABSTRACT

Moral sense is defined as a feeling of fairness or unfairness of an action that knowingly causes harm to people other than the subject. It is crucial in determining human behavior and becomes pivotal in operational environments. Here we assessed whether professional daily life experience in an operational environment affects moral judgment by asking 41 military pilots of the Italian Air Force (P) and 69 controls (C) to solve 40 moral dilemmas. We found that P gave more morally acceptable utilitarian responses to moral dilemmas. Interestingly, men and women in P equally accepted utilitarian resolutions of moral dilemmas, whereas in C women were less prone than men to accept utilitarian responses. We conclude that professional daily life experience of P, in an operational environment, affects moral judgment and mitigates gender predisposition towards moral dilemmas.

© 2017 Elsevier B.V. All rights reserved.

1. Introduction

Moral sense has been widely recognized as an ensemble of psychological mechanisms that enables otherwise selfish individuals to benefit from cooperation [1]. Recent evidence from cognitive neurosciences has helped clarifying the psychological mechanisms underlying moral judgment. One of the most fascinating models of human moral sense comes from the studies by Greene and col-

leagues who distinguished between personal and impersonal moral violations and judgments [2–4]. They proposed that a moral violation is personal if it is likely to cause serious bodily harm to a person not resulting from the deflection of an existing threat onto a different party [2]. They considered moral violations impersonal if they failed to meet these criteria. They also believed that personal moral dilemmas were more driven by social-emotional responses, whereas impersonal moral dilemmas were more linked to cognitive factors [3]. People were found more prone to accept impersonal moral violations than personal moral violations [4]. Furthermore, different brain areas were engaged in solving personal and impersonal moral dilemmas. In particular, brain areas associated with emotion and social cognition (i.e., medial prefrontal cortex, posterior cingulate cortex and precuneus, superior temporal sulcus and

* Corresponding author at: Department of Psychology, "Sapienza" University of Rome, 00185 Rome, Italy. Neuropsychology Unit, IRCCS Fondazione Santa Lucia, 00179, Rome, Italy.

E-mail address: maddalena.boccia@uniroma1.it (M. Boccia).

temporal-parietal junction) showed increased activity when participants were engaged with personal moral dilemmas, whereas cognitive brain areas associated with abstract reasoning and problem solving (i.e., the middle frontal gyrus and parietal lobe) showed increased activity while participants were engaged with impersonal moral dilemmas [4].

Manfrinati and colleagues [5] proposed a new set of moral dilemmas providing normative data validated for moral acceptability, decision times, and emotional salience. Moreover, they have explored the concept of intentionality in solving moral dilemmas, which was probably already present in Greene's model, but it had never been examined systematically. The authors proposed that the fundamental aspect of moral judgment concerns the distinction between moral intention and the consequences of an action. Accordingly, they revised the distinction between personal and impersonal moral dilemmas, suggesting further differences between personal and impersonal moral dilemmas. In impersonal moral dilemmas, the death and/or the sacrifice of one individual is a side effect, expected but not wanted, of an action aimed at saving more people (incidental dilemmas). Conversely, in personal moral dilemmas a person is used as a means to save other people, therefore he/she is instrumental in the achievement of the broader purpose of saving the life of a greater number of people (instrumental dilemmas). This distinction is based on the Doctrine of the Double Effect [6], according to which it is not permissible to intentionally cause harm for a greater good, although it is permissible as a foreseen but unintended side effect [7]. Moreover, they examined a new and interesting dimension of moral judgment, which is the subject's involvement in the moral choice. In this case, the sacrifice of an individual, besides saving a greater number of lives, will also save the decision maker's own life. They considered the choice of sacrificing one's own life to save a higher number of lives as an utilitarian response. They found that individuals produced more utilitarian responses on incidental dilemmas than on instrumental dilemmas, mirroring the well-known dissociation between impersonal and personal dilemmas. Participants also produced more utilitarian responses during Self-involvement as compared with Other-involvement scenarios [5]. Concerning the response time, individuals were slower in solving incidental moral dilemmas than instrumental moral dilemmas, which also resulted to be more acceptable [5]. Furthermore, moral violations during Self-involvement dilemmas are less acceptable than during Other-involvement conditions [5]. Concerning the arousal, measured by the Self-Assessment Manikin scale (SAM [8]), incidental dilemmas have been found to be more upsetting than instrumental dilemmas, and Self-involvement conditions were more arousing than Other-involvement [5].

Gender is one of the factors that affects moral judgment. Fumagalli and colleagues [9], who embraced Greene's theoretical frame about personal and impersonal moral reasoning [3,4], have recently found that men produced more utilitarian responses than women when they had to solve a personal moral dilemma. Gender differences in moral judgment have also been reported by Manfrinati and colleagues [5], who found that women were less prone than men to give utilitarian responses and showed slower decision times. Neuroimaging studies support the existence of gender differences in moral judgment: women showed a stronger modulatory correlation between posterior cingulate and insula activity when they were required to rate pictures depicting moral violations, whereas men showed a stronger modulatory correlation in the inferior parietal lobe [10]; furthermore, anodal stimulation of the ventral prefrontal cortex modified the occurrence of utilitarian responses in women more than in men [11].

Another factor that may affect moral judgment is linked to culture and individual experience. Moral sense has been defined as universal, yet culturally variable, and morality evolves with cul-

tural practices [12]. Different societies were found to vary in the degree to which moral judgments are parochial and contingent on the pronouncements of Authorities [13]. However, if culture is generally considered important on moral judgment, the role of the individuals' experience is more controversial. Few studies investigated, although indirectly, the role of professional daily life experience in moral judgment. In one of the few studies in this area, lawyers have been reported as perceiving themselves as significantly less emotionally involved during normative judgments [14]. Moreover, Clara et al. [15] investigating the effect of professional seniority in the resolution of clinical ethical dilemmas by vascular surgeons, have found a slight increase in self-interest attitudes. In a following study, Clara et al. [16] observed that both the youngest and the most senior vascular surgeons were more prone to favor compassionate attitudes when facing clinical ethical dilemmas. However, these studies focused on decisions taken about ethical dilemmas within the field of expertise (i.e., medical ethical dilemmas or legal ethical dilemmas) and their contribution to the study of the individuals' experience on moral judgment was completely indirect and tentative. Interestingly, occupational identity, which is particularly influential, and an inherently relational source of moral prescriptions, has been found to influence moral judgments as a function of its relational demand [17]. This result supports the idea that occupational identity, by depicting relational moral obligations, fosters individual moral judgment. Leavitt and colleagues [17] specifically demonstrated that soldiers (a professional identity with particularistic relational concerns) showed more flexible moral judgments (i.e., less principled) than physicians (a professional identity with universalistic relational concerns). This offers an initial investigation on how occupational identity influences moral judgment, but its effect on the main dimensions of moral judgment, such as intentionality and self-involvement, has not been investigated yet. Furthermore, the possible interaction between gender and occupational identity remains unclear. Like for other cognitive dimensions [18,19], individual's professional experience (as well as professional training) may mitigate the gender effect on moral judgment. One study has assessed decision making in military personnel [20], finding that individual experience affected real world decision making (for example, landing and flight control) and performance (for example, reaction times) in aviators. However, no study has examined moral judgment and/or gender differences in solving moral dilemmas.

Here we aimed at testing the effect of military experience in air pilots on different conditions of moral judgment, with specific reference to intentionality and self-involvement mentioned above. This will allow to shed some light on the effects of the environmental context (i.e. operational environment) on these levels of moral judgment, which has been never investigated before. We also tested whether the military experience affects gender-related differences on moral judgment. To pursue this aim we asked participants with (Pilot, P) and without military experiences (Control, C) to i) solve moral dilemmas, ii) express moral judgment about utilitarian responses, and iii) judge how they felt during moral decision-making. Pilots are trained to make decisions by using a decision –making process generally based on a system build on a Skill, Rule, Knowledge based approach (SRK [21,22]). In the SRK model, when individuals use the knowledge-based approach they apply previously learnt information, or information obtained through previous experiences, to make their decisions. Conversely, in the skill-based approach there is a smooth execution of highly practiced, largely physical actions virtually with no conscious monitoring. Finally, the rule-based approach requires the use of rules that have been learned during formal training. During operational training subjects in group P are specifically trained to use a rule-based approach, in order to act faster and save more lives. Thus, such a training is strictly oriented towards a utilitarian maxi-

Download English Version:

<https://daneshyari.com/en/article/5738628>

Download Persian Version:

<https://daneshyari.com/article/5738628>

[Daneshyari.com](https://daneshyari.com)