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Moral positioning in video games and its relation with dispositional traits: The emergence of a social dimension

Stefano Triberti [a,*], Daniela Villani [a,1], Giuseppe Riva [a,b,2]

[a] Department of Psychology, Università Cattolica del Sacro Cuore, Largo Gemelli 1, 20123 Milan, Italy
[b] Applied Technology for NeuroPsychology Laboratory, Istituto Auxologico Italiano, via Magnasco 2, 20149 Milan, Italy

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ABSTRACT

Over the past 30 years, video games have become an important part of contemporary global entertainment and media. One relevant issue among the possible video game effects on behavior is related to violence and aggression tendencies. The debate on this topic is still open and highlights the importance of considering possible mediating factors, such as moral positioning (e.g., preferences for evil/good characters/choices in video games), empathy, and personality of video gamers. This study aimed to investigate the relationship between moral positioning of video gamers and personality traits, aggression tendencies, and social abilities. 224 players completed an online survey including ad hoc questions about their preferences for evil/good characters and choices in video games and several validated questionnaires to assess their dispositional traits. Results showed that gamers' preferences for playing evil characters were negatively associated with extraversion, agreeableness, and empathy. Aggression was only partially correlated with evil moral positioning; specifically, in terms of physical aggression. Moreover, evil moral positioning in video games did not predict aggressive tendencies, but partially predicted low levels of empathic ability in players. The findings are discussed with reference to a social conception of video game play and to possible implications for the educational context.

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1. Introduction

Over the past 30 years, video games have become an important part of contemporary global entertainment and media. The increasing number of video gamers has lead researchers to focus their attention on video game effects on behavior. One relevant issue is related to the effects of violent video games on aggression.

Despite a great number of publications discussing this topic, it remains complex and characterized by substantial uncertainty. A recent article from *The Guardian* (Etchells, 2013) well summarized the current situation of the phenomenon. On the one hand, the media still identify video games as a possible contributory cause for real-life violent and criminal events (Anderson & Bushman, 2001; Bartholow, Bushman, & Sestir, 2006; Bushman & Anderson, 2002; Hollingdale & Greitemeyer, 2013; Norris, 2004). On the other hand, the literature is filled more so with intense debates (Anderson et al., 2010; Bushman, Rothstein, & Anderson, 2010; Ferguson, 2015; Ferguson & Kilburn, 2010) and contradictory results (Ferguson, San Miguel, Garza, & Jerabeck, 2012; Markey, Markey, & French, 2014; Willoughby, Adachi, & Good, 2012).

Specifically, research has found that violent video games seem to increase aggressive behaviors in players, at least in the short-term (Bartholow, Sestir, & Davis, 2005; Greitemeyer & Mügge, 2014; Schutte & Malouff, 1988); promote aggressive representations of others, such as hostile attribution bias (Anderson & Dill, 2000; Bösche, 2010; Moller & Krahé, 2009); and generate negative emotions (anger) that can persist in the player after the game and influence his or her real life behaviors (Anderson & Dill, 2000; Carnagey, Anderson, & Bushman, 2007). However, other studies have not found significant results for increases in aggression and anger (Unsworth, Devilly, & Ward, 2007), and some have shown that the effects disappear in the long-term, especially when one accounts for other personal or environmental causes for aggressive behaviors (Ferguson et al., 2012).

These inconsistent findings can be explained in several ways ranging from poor research design and invalid measurements to publication bias (Ferguson, 2007a, 2007b; Markey & Markey, 2010). For example, some researchers have suggested that

* Corresponding author. Tel.: +39 02 72343863.
E-mail addresses: stefano.triberti@unicatt.it (S. Triberti), daniela.villani@unicatt.it (D. Villani), giuseppe.riva@unicatt.it (G. Riva).
[1] Tel.: +39 02 72343863.
[2] Tel.: +39 02 72343863, +39 02 619112892.

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different types of violence and aggression should be distinguished among video games content (Ferguson, 2010; Kontour, 2009), which suggests that certain violent representations are not necessarily linked to antisocial behaviors (e.g., there may be a difference between cartoon violence that takes place in a funny, unrealistic environment and a virtual representation of realistic criminal conduct). Similarly, situational factors, such as identity and proximity of the game opponent, influence aggressive tendencies (Williams & Clippinger, 2002).

It is also possible that these findings have been less than consistent because researchers have not always considered possible mediating factors (Matthews, 2015). In this sense, the video game player is not to be conceived as a machine that automatically repeats the behaviors it sees. On the contrary, the player actively enters the game with his or her own characteristics and elaborates the complex information received from the game. For example, researchers indicate that personality can guide media preferences (Kraaykamp & van Eijck, 2005), which suggests that people seek out entertainment that reflects and reinforces aspects of their personalities (Rentfrow, Goldberg, & Zilca, 2011). In this sense, dispositional aspects could led video gamers to choose violent video games or to protect themselves from the violent media exposure.

1.1. Morality, empathy, and personality as mediators of the effects of violent video games

An important mediating factor, which has recently emerged in literature, is *morality*, conceived as the moral characterization of the avatar as it is expressed by the game narrative (Gabbiadini, Riva, Andrighetto, Volpato, & Bushman, 2013; Schulzke, 2010; Sicart, 2009; Weaver & Lewis, 2012). According to Funk, Buchman, Jenks, and Bechtoldt (2003), moral evaluation in video games is an automatic process that is triggered when the situation requires that certain normative beliefs guide behavioral choices. Dodge and Schwartz (1997) stated that the moral evaluation of the appropriateness of violent behaviors includes the social information processing stages. According to these stages, players must first selectively attend to and interpret the appropriate cues, then determine their goals for the situation and how to best attain those goals.

Indeed, video game players often reflect about moral content that is expressed in the games (Pohl, 2008), and they feel a real sense of guilt when they perform immoral actions in these virtual environments (Grizzard, Tamborini, Lewis, Wang, & Prabhu, 2014; Hartmann, Toz, & Brandon, 2010). Also, pro-social content in video games can promote abilities linked to moral behavior, such as empathy (Gentile et al., 2009; Greitemeyer & Mügge, 2014; Greitemeyer, Osswald, & Brauer, 2010; Velez, 2015). Happ, Melzer, and Steffgen (2013) recently investigated the effect of the moral positioning of characters on players' behaviors. Participants played the same game (*Mortal Kombat vs. Dc Universe*) using a violent evil character (Joker) or a violent good character (Superman). Not only did the Superman players not show effects in their aggressive tendencies, but also they outperformed the others in a pro-social task. Similarly, in an experiment by Gitter, Ewell, Guadagno, Stillman, and Baumeister (2013), players killed virtual zombies in a pro-social and morally justified context (protecting a friend) or in a morally ambiguous context (just kill as many zombies as possible). Participants in the first condition showed lower short-term aggression and higher levels of pro-social cognition.

In general, moral evaluation is influenced by the individual's affective repertoire, including empathy (Hoffman, 2000). Empathy is a complex construct that includes both cognitive (perspective-taking) and affective responsiveness to the perceived emotional state of another. Empathy and attitudes toward violence are correlated components of moral evaluation where strong pro-violence attitudes are associated with low levels of empathy (Funk et al., 2003). Further, empathy is needed to transform moral standards into emotionally charged cognitions, which influence behavior, the product of moral evaluation. By investigating game preferences and empathy in the video game context, Barnett et al. (1997) found that adolescents who preferred violent games had lower empathy scores.

Attitude toward violence is another important component of moral evaluation. Among individuals who attribute hostile intent to another when a situation is ambiguous, positive attitudes toward violence may encourage them to act in an aggressive manner (Velicer, Huckel, & Hansen, 1989). Researchers have found that aggressive gamers appear more likely to appreciate violent video games, although violence did not improve their enjoyment during game play (Przybylski, Ryan, & Rigby, 2009). Additionally, impulsive and aggressive gaming styles or the preference for violent video games often results in low empathy, low agreeableness, and high aggression tendencies (Hartmann et al., 2010; Hollingdale & Greitemeyer, 2013; Sukeena, Moore, & Minear, 2013; Van Schie & Wiegman, 1997).

Not only individual dispositions are associated with preference for violent video games, but also several researchers have suggested that the personality traits may mediate media violence effects (Ferguson, Colwell, Mlačić, Milas, & Mikloušić, 2011; Ferguson et al., 2008). In particular, Markey and Markey (2010) suggested that a simultaneous combination of several Five-Factor Model traits, including high neuroticism (e.g., easily upset, angry, depressed, emotional, etc.), low agreeableness (e.g., little concern for others, indifferent to others feelings, cold, etc.), and low conscientiousness (e.g., break rules, do not keep promises, act without thinking, etc.) are more powerful mediators of violent video games.

Based on these statements, as first we assume that video gamers actually have preferences for morality positioning. That is, being moral in part relates to individual dispositions, so that video gamers do not choose to play as good or evil randomly. For this reason, we first considered that some players may have a preference for the evil characters or play, while others may have preferences for the good ones. We investigated morality positioning through four ad hoc questions and we analyzed the consistency in measuring a single construct.

Then, we expected to replicate the findings of previous research by carrying out a cross-sectional study. Specifically, the study aims to test the following hypotheses:

Hp1. A stronger evil moral positioning in video games is associated with video gamers' lower empathy.

Hp2. A stronger evil moral positioning in video games is associated with higher aggressive attitudes.

Hp3. A stronger evil moral positioning in video games is associated with personality dispositions of video gamers in terms of high neuroticism, low agreeableness, and low conscientiousness.

To date, no research attempts have explicitly investigated the relationships between personality correlates of players and their moral positioning in video game narratives. In recent years, moral choice has become an increasingly popular plot mechanism in video game play (Weaver & Lewis, 2012) and, according to our opinion, such an attempt is important; precisely, recent research has investigated the effects of evil/good playing experimental conditions on behavior (Happ et al., 2013); however, according to our

knowledge no research investigated personal video gamers' attitudes/preferences in terms of morality positioning in games. On the one hand, this study examined the relationship between dispositional variables and preferences for interpreting evil characters/making evil choices in video games. On the other hand, the study is one of very few to attribute an active role to players and to consider the importance of moral positioning as a potential mediator of media effects. Recent research has highlighted that evil or good playing in video games seems to generate opposite effects on behavior (Gitter et al., 2013; Happ et al., 2013), thus, we wanted to verify this aspect.

We then predicted that evil moral positioning in video games would be related to aggression tendencies and empathic abilities. Specifically, we hypothesize that:

Hp4. The evil moral positioning in video games could partially predict positive aggression tendencies of the players.

Hp5. The evil moral positioning in video games could partially predict negative empathic abilities of the players.

2. Materials and methods

The Internet provides considerable opportunities to expand the ways we conduct psychological research (Skitka & Sargis, 2006) and several studies have indicated that web-based data collection results in greater sample diversity, generalizes across presentation formats, and findings are consistent with data collected using more traditional means (Gosling, Vazire, Srivastava, & John, 2004). Therefore, an advertisement for research participation containing a hyperlink to a questionnaire on a secure server of the Psychology Department was posted on the most popular Italian online game sites from January to April 2014.

The online survey was conducted on some popular Italian gaming websites and forums; therefore, participants can be regarded as a representative sample of video game users in Italy. Surveys that were not filled out completely or appropriately were excluded from the analyses. As a result, 224 participants filled out the informed consent and the whole survey on the online form. The online survey consisted of three parts aimed to study gamer demographic data and their actual game use, whether they engaged themselves with good vs evil gaming, and personality characteristics.

2.1. Participants

The final number of participants ($N = 224$) included 175 males (78.1%) and 49 females (21.9%) ranging in age from 12 to 47 years ($M = 24.93$, $SD = 5.31$). Participants used more single player ($n = 150$, 67.0%) than multi-player games ($n = 74$, 33.0%). Participants who were frequent players answered to the question "*How often do you play video games during a week?*" in an equally distributed manner: two times a week ($n = 67$, 29.9%), four-five times a week ($n = 72$, 32.1%), and every day ($n = 85$, 37.9%).

We also asked participants to write an example of an evil and a good character from video games. A variety of famous characters appeared in the database. To satisfy curiosity, we report the most frequent ones: Super Mario (chosen by 19 participants), Batman (12 participants) and Lara Croft (8 participants) as good characters, and Trevor Phillips from *Grand Theft Auto* (9 participants) and the Joker (8 participants) as the evil ones. Interestingly, some participants chose characters, such as Agent 47 from *Hitman* and Ezio Auditore from *Assassin's Creed*, as good, while other chose them as evil, which highlights the moral ambiguity that can be represented in video games.

2.2. Measures

2.2.1. Morality positioning

Looking at types of existing video games, we identified that morality can be implemented in four main ways. Some video games ask to the player if he or she wants to take the side of good or evil forces prior to game starting (*Starcraft* series, *Star Wars: The Old Republic*); others request the player to choose his or her character among some available avatars (those often represented also as good or evil; e.g., beat'em up games such as *Tekken* series, *Street Fighter* series). Other games invite the player to morally customize an initially neutral character during the game (*Fable* series, *Mass Effect* series); last but not least, others that do not involve an explicit moral characterization of the avatar are filled with moral choices that will affect the subsequent narrative development (Telltale Games such as *The Walking Dead*, *The Wolf Among Us*).

According to these categories, we used four ad hoc questions to investigate morality positioning (see Table 1). Participants answered these questions on a 7-point Likert scale that ranged from 1 ("totally false for me") to 7 ("totally true for me").

Items were subjected to an exploratory principal component analysis (PCA; Varimax rotation) that resulted in one component explaining 48% of the variance. The values associated to the four questions on the single component are displayed in Table 1.

This analysis showed the internal consistency of the four questions in measuring the same construct; that is, a "morality positioning" existed among video game players and it expresses across different types of morality-gaming opportunities.

2.2.2. Dispositional traits

To assess personality, we referred to the taxonomic structure derived from factor analytics consisting of five bi-polar dimensions that categorize the fundamental facets (traits) of human personality. Over time, the Five Factor Model (Costa & McCrae, 1992; McCrae & Costa, 2008) has become the primary exemplar for the explanation and prediction of behavior. The acronym OCEAN represents the five domains of personality: *Openness*, such as curious, imaginative, and artistic people; *Conscientiousness*, such as efficient, organized, and thorough people; *Extraversion* such as sociable, energetic, and enthusiastic people; *Agreeableness*, such as forgiving, warm and sympathetic people; and *Neuroticism*, such as tense, irritable, and moody people. The Italian version (Ubbiali, Chiorri, Hampton, & Donati, 2013) of the Big Five Inventory (BFI) (John, Donohue, & Kentle, 1991) was used to measure each OCEAN domain by quantifying participants' responses on a number of individual facets. This measure is comprised of 44 self-reported items; each item requires the respondent to indicate, on a 5-point scale, the extent to which a characteristic accurately describes him or her; for example, "is talkative" or "gets nervous easily". The reliability of each domain scale was assessed. The Cronbach's alpha scores of each domain were as follows, Energy (extraversion) = .85, Agreeableness = .69, Neuroticism = .80, Conscientiousness = .84, and Openness to Experience = .77.

To assess participants' empathic responsiveness, we used the Interpersonal Reactivity Index (IRI; Davis, 1983). The IRI consists of 28 items and measures four dimensions: *Empathic*

Table 1
Principal component analysis of the moral positioning questions.

Morality questions	Component 1
"To interpret an evil character is funny"	.767
"I tend to choose evil characters"	.823
"I prefer to customize a neutral character as evil"	.825
"I prefer to make evil choices"	.791

Consideration (feeling emotional concern for others), *Perspective Taking* (cognitively taking another's perspective), *Fantasy* (emotional identification with fictional characters), and *Personal Distress* (negative feelings in response to the distress of others). Each dimension consists of seven items, which were scored on a 5-point Likert scale ranging from 1 ("does not describe me well") to 5 ("describes me very well"). Davis (1983) reported alpha levels for the subscales ranging from .71 to .77. The Italian validated version of the questionnaire (Albiero, Ingoglia, & Lo Coco, 2006) that was used in this correlational study, demonstrated satisfactory reliability and good internal consistency (Empathic Consideration: $\alpha = .73$; Perspective Taking: $\alpha = .80$; Fantasy: $\alpha = .79$, Personal Distress: $\alpha = .79$).

Trait aggression was measured using the Italian version (Fossati, Maffei, Acquarini, & Di Ceglie, 2003) of the Aggression Questionnaire (AQ; Buss & Perry, 1992). Cronbach's alpha was .88. The AQ includes 29 items scored on a five-point Likert scale ranging from 1 ("extremely uncharacteristic of me") to 5 ("extremely characteristic of me"). The Aggression Questionnaire is based on a complex conception of aggression, which is composed by four sub traits. *Physical and Verbal Aggression* that represent the instrumental or motor components; *Anger* that constitutes the emotional or affective component, that is, the physiological arousal as preparation for aggression; and *Hostility*, which originated by combined items investigating "resentment" and "suspicion", "consists of feelings of ill will and injustice and represents the cognitive component of behavior" (Buss & Perry, 1992, p. 457). Finally, *Aggression Total* was computed by the sum of scores on the four subscales. The test–retest correlations demonstrated adequate stability over time (Physical Aggression: $\alpha = .81$; Verbal Aggression: $\alpha = .70$; Anger: $\alpha = .75$; and Hostility: $\alpha = .79$.).

3. Results

3.1. Associations between evil moral positioning and dispositional traits

To test our hypotheses about associations between evil moral positioning and dispositional traits, we performed several bivariate correlations. The results of all the correlations are shown in Table 2. According to the hypotheses, first we tested whether an association existed between the preference for evil moral positioning of video game players and lower empathy scores (Hp1) using morality ad hoc questions and the IRI subscales. Negative correlations are present for the evil positioning and empathy scores. Precisely, those who preferred behaving as evil in video games were characterized by poor abilities to cognitively represent the emotional states of others (perspective taking) and to feel emotional concern for others (empathic consideration). We also found weaker correlations for the Fantasy subscale, which highlights that the preference for evil choices and evil characters is associated with a poor tendency to identify within fictional characters.

Secondly, we tested whether an association existed between the preference for evil moral positioning of video game players and higher aggressive tendencies (Hp2). Table 2 shows the significant results from the bivariate correlations between the morality positioning questions and the subscales (plus Aggression Total) of the Aggression Questionnaire. Physical aggression was positively associated with evil moral positioning, while isolated results for hostility and total aggression likely indicate weak and random relations between the constructs. In this sense, the preference for evil playing could be associated with the motor or impulsive components of trait aggression, but not with the cognitive and affective ones.

Then, we wondered whether a relationship existed between evil moral positioning in video games and players' personality traits (Hp3). In particular, we expected significant negative correlations between evil positioning and the Big Five traits Agreeableness and Conscientiousness and positive correlations between evil positioning and Neuroticism. Contrary to our expectations, evil moral positioning was not significantly correlated with Neuroticism and was only weakly associated with Conscientiousness. It emerged that no relation existed between being high irritable and moody or low efficient and organized and preferring evil positioning in video games. The results also showed a stable situation in terms of negative correlations between evil moral positioning and Agreeableness and Extraversion. This finding means that players who prefer evil positioning in video games are low sociable and low sympathetic people.

3.2. Predictions of evil moral positioning on aggression and empathic abilities

In the end, we tested whether the preference for evil moral positioning could partially predict positive aggression tendencies (Hp4) and negative empathic abilities (Hp5) in players.

Table 2
Bivariate correlations between morality positioning questions and the dispositional traits.

Questionnaires	Subscales	Morality 1: "To interpret an *evil character is funny*"	Morality 2: "I tend to *choose evil characters*"	Morality 3: "I prefer to *customize as evil* a neutral character"	Morality 4: "I prefer to *make evil choices*"
Interpersonal reactivity index	Fantasy	−.042	−.181*	−.113	−.157*
	Empathic consideration	−.262**	−.299**	−.176**	−.319**
	Perspective taking	−.150*	−.190**	−.204**	−.160*
	Personal distress	−.015	−.022	−.048	−.105
Aggression questionnaire	Physical aggression	.138*	.195**	.151*	.114
	Verbal aggression	−.058	.043	−.016	−.010
	Anger	.046	.065	.081	.014
	Hostility	.101	.149*	.083	.059
	Aggression (total)	.092	.161*	.110	.068
Big five inventory	Conscientiousness	−.151*	−.051	−.071	−.094
	Openness	−.022	−.096	−.059	−.085
	Neuroticism	.098	.065	.084	.030
	Extraversion	−.203**	−.176**	−.181**	−.159**
	Agreeableness	−.198**	−.271**	−.258**	−.337**

Notes: IRI, aggression questionnaire and BFI.
* $p < .05$.
** $p < .01$.

Table 3
Coefficients of Linear Regressions between Evil Moral Positioning and Aggression/Empathy Scales.

Independent	Dependent	Unstandardized coefficients		Standardized coefficients		Sig
		B	Std. error	Beta	*t*	
Evil moral positioning	AQ physical aggression	0.673	0.336	0.133	1.999	0.047
	AQ verbal aggression	−0.018	0.080	0.015	−0.224	0.823
	AQ anger	0.101	0.104	0.065	0.971	0.332
	AQ hostility	0.232	0.128	0.121	1.812	0.071
	AQ aggression (total)	0.358	0.128	0.185	2.804	0.005
	IRI fantasy	−0.214	−0.095	−0.149	−2.245	0.026
	IRI perspective taking	−0.290	0.87	−0.218	−3.328	0.001
	IRI personal distress	−0.077	−0.090	−0.057	−0.858	0.392
	IRI empathic consideration	−0.400	−0.079	−0.323	−5.092	0.000

Table 4
Model summary of linear regressions between evil moral positioning and aggression/empathy scales.

Independent	Dependent	*R*	R^2	Adjusted R^2	Std. error of the estimate
Evil moral positioning	AQ physical aggression	0.185	0.034	0.030	6.441
	AQ verbal aggression	0.015	0.000	−0.004	4.054
	AQ anger	0.065	0.004	0.000	5.231
	AQ hostility	0.121	0.015	0.010	6.458
	AQ aggression (total)	0.133	0.018	0.013	16.982
	IRI fantasy	0.149	0.022	0.018	4.802
	IRI perspective taking	0.218	0.048	0.043	4.395
	IRI personal distress	0.057	0.003	−0.001	4.559
	IRI empathic consideration	0.323	0.105	0.101	3.968

First, we computed a new variable, evil moral positioning, which was the sum of participants' responses to the four morality questions. Then, we tested evil moral positioning as a possible predictor for the scales of the Aggression Questionnaire (physical aggression, verbal aggression, anger, hostility, aggression total) and the scales of IRI (fantasy, perspective taking, personal distress and empathic consideration) using linear regression analyses. Evil moral positioning was a significant predictor for Physical aggression and aggression total (positive coefficients) and for fantasy, perspective taking, and empathic consideration (negative coefficients). However, the fit of the first model (aggression subscales) and fantasy and perspective taking scales were very low (<1%); therefore, the level of prediction is irrelevant. Conversely, evil moral positioning significantly explained 10% of the variance for empathic consideration (see Tables 3 and 4 for the results of the regression analyses).

4. Discussion and conclusions

According to literature (Crick & Dodge, 1996; Dodge & Schwartz, 1997), moral choice depends on social information processing. Individuals have to first selectively attend to and interpret the appropriate social cues, then determine their goals for the situation and how to best attain those goals. More recent conceptions of morality ("Ethics of Care") (Held, 2010; Noddings, 2008) state that concrete, specific situations of social life, which are characterized by relationships to be built and maintained, are the most powerful motivators of ethical behavior, instead of the adherence to abstract moral principles (Kantian perspective) or the achievement of pleasure (utilitarian perspective).

Some authors have considered the Ethics of Care approach in studies on video games (Murphy & Zagal, 2011). According to them, video games are not only able to make moral propaganda or describe moral systems (this is possible for books and movies too), but also to place gamers in complex narratives and virtual situations that stimulate, challenge, and promote their moral reasoning. Although as a virtual simulation, a video game allows the player to experience an adventure. The player takes the point of view of a character who feels emotions for the other characters he meets, and who actively confronts the ideals, objectives, and concerns in the situated context of the narrative. This means that video games have a strong potential influence on players' moral systems, and may also modify their social attitudes in real life.

In general, moral reasoning is certainly affected also by personality traits and individual differences (Arsenio & Lemerise, 2004; Fite, Goodnight, Bates, Dodge, & Pettit, 2008). For example, the choice to act in a violent or aggressive manner is influenced by the subjective ability to understand the emotions of others, or even to experience their same suffering when observing it (Björkvist, Österman, & Kaukiainen, 2000; Mayberry & Espelage, 2007; Mehrabian, 1997). Moreover, sociable and friendly individuals are less likely to engage in immoral behaviors (Egan, 2009; Gleason, Jensen-Campbell, & Richardson, 2004; Van Dam, Janssens, & De Bruyn, 2005), rather they tend to enact pro-social behaviors (Carlo, Okun, Knight, & de Guzman, 2005). Similar inclinations are possible in video games as well because they are complex artifacts that are becoming characterized more so by moral positioning features. In this sense the "positioning" of the player in front of the video game content deeply influences the values that he or she takes from the experience. In addition, aggressive behaviors can be perceived diversely according to the meaning that both the player and the video game narrative attribute to it.

The first result of the present research showed that a moral positioning exists in video games. That is, video game players do not make a "random" use of the possibilities the game offers to them in terms of morality. Rather, video game players tend to prefer certain moral positions. Indeed, there are players who prefer to play as good and those who prefer to play as evil. These preferences tend to remain constant across different types of "moral affordances" that can be present in video games (evil or good characters, character choice, character moral customization, moral choices situated in the narrative).

In the present research, the preference for "evil" behaviors in video games (i.e., antisocial, harmful behaviors lacking of possible

moral justifications) was associated with specific personal abilities and personality traits. Precisely, video game players who were more likely to play as evil characters were also those who were less capable of understanding or feeling others' emotions. Moreover, these players were less extraverted and social and less warm and sympathetic. These relationships seem to highlight a social dimension associated with the evil moral positioning. If video games can actually influence real-life behaviors, this does not occur because of a mechanic imitation of video games scenes by the players. On the contrary, when an individual decides how to behave, he or she engages in active social information processing, which also occurs in video games. In this sense, we do not sustain that an evil positioning in video games may be indicative of a moral positioning in real life. On the contrary, the possible video game effects are probably affected by the personal reasoning and sense making by players who are also influenced in their choices by individual dispositions. In the context of the virtual adventures of video games, the most important dispositions appear to be those related to social life and attitudes toward others.

The moral preferences also appear positively and partially related to trait aggression, but only to its motor components. Therefore, the one who "has fun being evil" may have a tendency to react impulsively, but not the inclination to anger (emotional aggression) nor to hostility or suspicion (cognitive aggression). Probably, the evil moral positioning of video games is a modality to express negative attitudes and moods in a secure environment. This result appears consistent with other studies carried out with children, where researchers have found cathartic effects of violent video games and highlighted that the possible effects of gaming on aggression tendencies were mediated by players' emotions and feelings prior to game play (Colwell & Kato, 2003; Unsworth et al., 2007). It may be also possible that video game players use violent games to reduce their anger over life stress (Colwell, 2007; Ferguson et al., 2011; Olson, 2010).

The literature has identified morality as a possible mediator for violent video games on aggression (Gitter et al., 2013; Happ et al., 2013; Hartmann, Krakowiak, & Tsay-Vogel, 2014) and has investigated individual differences and pre-existent psychological states as possible influences of behavioral outcome (Colwell & Kato, 2003; Happ & Melzer, 2014; Happ, Melzer, Steffgen, 2015; Markey & Markey, 2010; Unsworth et al., 2007). In this sense, our final analysis tried to understand whether the preference for evil moral positioning in video games could at least partially predict aggression tendencies or social abilities of players.

Linear regressions revealed that 10% of the variance in the ability to understand the emotions of others (empathic consideration) was significantly explained by the preference for evil playing, with a negative coefficient. Precisely, it seems that preferring to play as evil is related to low scores in empathic ability. This prediction should be read in light of previous findings that emerged from the correlations. It appears that the lack of ability to read the emotions of others is associated with evil moral positioning and remains even after the in-game choice. However, this study is based on a cross-sectional design, which is often used in gaming studies (Haagsma, Caplan, Peters, & Pieterse, 2013). This type of design does not allow drawing conclusions about causality, which can be stated as a limitation of our research; to investigate whether gamers' moral positioning may contribute in causing increases/reductions in social abilities such as empathy may be an important objective for future research, and can be achieved thanks to longitudinal designs and/or manipulation of experimental conditions. Another limitation of our study refers to the exclusive use of self-reported data. Although this method is quite common in the research about violent media and their effects on attitudes/behavior (Prot et al., 2014; Gentile, Li, Khoo, Prot, & Anderson, 2014; Swing & Anderson, 2014), it is possible that self-presentation partially influenced the data.

In conclusion, the present research tested whether video game players engaged within the narrative properties of video games based on their own dispositional tendencies. We focused on moral positioning (i.e., preferring to play as evil or good characters; to make evil or good choices in the game context) because recent literature showed that moral characterization may be an important mediator for the possible effects of violent video games on real-life behavior.

Both studies on violence and aggression (Björkvist et al., 2000; Jensen-Campbell, Knack, Waldrip, & Campbell, 2007) and immoral or antisocial behaviors (Blackburn, Renwick, Donnelly, & Logan, 2004; Miller & Eisenberg, 1988; Shirtcliff et al., 2009) found that similar tendencies could be partially explained by personality traits and social abilities. Interestingly, this relationship also emerged in the context of video games, with "evil" players showing lower extraversion, lower agreeableness, and lower empathic abilities. In contrast with previous studies stating that violent video games seem to increase aggressive behavior tendencies in players (Anderson & Dill, 2000; Bushman & Anderson, 2002; Moller & Krahé, 2009), we found that the evil moral positioning is irrelevant in predicting aggressive tendencies. Regarding future research on violence, morality, and video games, it will be important to verify within experimental procedures how moral positioning and dispositional factors may affect the possible effects of video game playing on behavior.

5. Implications

Here we would like to provide insights that may be useful and interesting for future studies and applications. Maybe, research should consider video games as "moral laboratories" that players use to experiment with social behavior. In this sense, a moral video gaming monitored by educators and caregivers may also become a future resource for moral education. Say, since the present study showed that social abilities and personality traits related to social behavior (agreeableness, extraversion) appear associated with moral positioning in video games, further research on the topic should deepen the strength of this association, exploring the possibility to use moral video games as a possible resource to assess one's social attitude. Moreover, video games are resources for morality education in that "ethical play is in some sense practice for the real world experience" (Murphy & Zagal, 2011, p.78). This means that it is already possible to prefigure the use of video games (and/or serious games) for morality education/empowerment. For example, interactive virtual scenarios can be used to present moral dilemmas to the players, a method which is quite common in morality education (Nucci, Krettenauer, & Narvaez, 2008). In this sense, video games offer two main opportunities: first, they allow one to witness the consequences of his/her own moral choices and reflect on them in a secure context; second, they allow to re-perform moral choices more times, this way providing an experience of social information processing. The interest toward the implications described here is strengthened by the first attempt recently made to use video games and serious games for morality education (Krebs, 2013). Video games can be used to help players express and experiment with their own social behaviors and tendencies in the secure context of these virtual worlds.

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