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THE GOOD, THE BAD, AND THE COMPASSIONATE: COMPASSION SHAPES EMOTIONAL AND PROSOCIAL REACTIONS TO THE SUFFERING OF NEGATIVELY PERCEIVED TARGETS

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Abstract

Harsh reactions toward transgressors reinforce behaviors in line with laws and social norms, thus reducing collective suffering. But punitive measures do not come without a cost. Bystanders often fail to acknowledge or show concern for the pain experienced by people who have previously transgressed. In this project, we aimed at testing the role of compassion in counteracting this tendency. Studies 1a, 1b, and 1c had the preliminary aim to explore in depth the construct of dispositional compassion. First, we validated in Italian two recent multidimensional scales assessing dispositional compassion, finding substantial support for their original factor structure. Second, we employed network analysis to identify which facets of the two scales stand at the core of dispositional compassion. Third, we provided support for the convergent and discriminant validity of both scales, and examined their different correlation patterns. Studies 2, 3a, and 3b were aimed at understanding whether dispositional compassion buffers people's tendency to react poorly to the suffering of negative targets who act transgressively. Results of Study 2 showed that, contrary to our hypothesis, highly compassionate participants experienced fewer compassionate emotions and prosocial reactions for a suffering target who previously committed an egoistic transgression, in the context of the Covid-19 pandemic. Starting from this result, Studies 3a and 3b compared different violations of moral norms (vs. positive behaviors) to explore whether this happens only when a target violates a norm related to taking care of others and protecting their collective well-being. Results partially confirmed our hypotheses: as predicted, when the target violated (vs. behaved in line with) a norm related to taking care of others, highly compassionate participants reported fewer prosocial intentions toward him, whereas this difference did not occur for participants low in dispositional compassion. Differently, highly compassionate participants reported fewer compassionate reactions for the negative (vs. positive) target, regardless of the moral norm violated. Additionally, we found that different cognitive and emotional factors mediate the effect of the target's behavior (transgressive vs. not) on the reactions to his suffering. Studies 4 and 5 tested the effects of different short compassion trainings in increasing compassionate and prosocial reactions

toward targets behaving transgressively at the interpersonal and at the collective level. Results of the studies proved the effectiveness of different compassion trainings, and especially of a compassion training based on the love for relatives and close others. In Study 5, we also showed that the trainings work regardless of participants' levels of dispositional compassion. These findings expand current socio-psychological research on compassion by providing a novel perspective on the construct – both at the trait-like and state-like level – and showing how it shapes emotional and prosocial reactions to the suffering of negatively perceived targets.

The good, The Bad, and The Compassionate: compassion shapes emotional and prosocial reactions to the suffering of negatively perceived targets

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Introduction: Overview of the PhD project

Compassion is a complex and multifaced construct whose origins date back to ancient Buddhist traditions and that progressively gained popularity within the scientific community, especially in the psychological field. Given its other-oriented nature, compassion rapidly became a matter of interest for social psychologist, who explored its beneficial effects, both treating it as a trait-like disposition and as a state-like emotion to be fostered. The present PhD project is built upon this premises and is divided in three parts.

The first section (Chapters 1 and 2) has the preliminary aim to explore in depth the construct of dispositional compassion and its assessment, relying on two recent multidimensional scales: the Sussex-Oxford Compassion Scale – toward Others (SOCS-O; Gu et al., 2020) and the Compassion Scale (CS; Pommier et al., 2020). Three correlational studies (Study 1a, 1b, and 1c) were aimed at: (a) validating the scales in Italian; (b) testing the simultaneous links between SOCS-O and CS facets via network analysis to identify which facets stand at the core of dispositional compassion and which are more distal; (c) exploring the nomological net of correlates of dispositional compassion and examining the differences between the SOCS-O and the CS in their relationship with a list of correlates. Importantly, the first part of the project was crucial to obtain valid and reliable multidimensional measures of dispositional compassion to be employed in the following steps of the project.

Part 2 and Part 3 represent the core of the project, and explore the role of compassion in shaping people's tendency to react to the suffering of negatively perceived targets who behave transgressively. Concerning Part 2, Chapter 3 presents scientific literature, as well as Buddhist theoretical accounts, in support of the idea that being compassionate might lead people to be more sensitive and reactive to others' suffering, even when they behave negatively. Chapters 4 and 5 focus on dispositional compassion, exploring its moderating role in three experimental studies. Study 2 tested whether dispositional compassion increases participants' emotional and prosocial

reactions to the suffering of a target behaving transgressively for egoistic (vs. altruistic vs. control) reasons, in the context of the Covid-19 pandemic. Studies 3a and 3b were designed upon the results of Study 2 and focused on Care and Fairness moral violations, relying on the Moral Foundation Theory (MFT; Haidt & Graham, 2007). Specifically, we tested whether dispositionally compassionate participants were more sensitive to the suffering of negative (vs. positive) targets, but at the same time were less positive toward those who commit a Care (vs. Fairness) transgression, which entails an explicit harm of others' well-being. Additionally, Study 3b also explored whether the reactions of highly compassionate participants to the suffering of negative (vs. positive) targets are mediated by cognitive and emotional factors, which differ in according to the salient moral norm (Care or Fairness).

Part 3 is focused on compassion trainings. Chapter 6 presents current scientific literature on compassion trainings and their beneficial effects, also focusing on the Buddhist dual conceptualization of compassion, which theorizes that compassion can be either based on love and affection toward close others (i.e., compassion based *on biology*) or on reasoning, by realizing that all people have the same right to be happy and not to suffer has we have (i.e., compassion based *on reason*). Chapter 7 explored the effects of different compassion trainings, in increasing compassionate and prosocial reactions toward targets behaving transgressively at the interpersonal and at the collective level. In two studies (Studies 4 and 5), we developed two short trainings, priming either compassion based on biology or on reason. In Study 4, participants did one of the trainings or a control task, then read the story of a suffering person who committed an interpersonal transgression and reported their reactions toward him. In Study 5, we also manipulated the behavior of the target, either positive (i.e., no transgression) or negative (i.e., a collective transgression). Finally, in the General Discussion, we provide an overview of the results and discuss upon the individual and societal benefits of improving people's emotional and prosocial reaction to others' suffering, even when they behave negatively and transgressively.

Chapter 1. What is compassion and how can we measure it

1.1. The roots of the construct: Compassion in Buddhism

The fact that contemplative traditions have long been concerned with questions of human suffering makes compassion far from being a novel concept. Indeed, for thousands of years, ancient philosophical and spiritual traditions elaborated upon the nature of this construct, in both Western and Eastern cultures. In the West, the Greek philosopher Aristotle has been among the firsts who conceptualized compassion, defining it as an emotion concerning the suffering that affects other people (e.g., Roberts, 1989). Compassion gained a central focus also in Christianity, which often paired it to concepts such as pity and mercy (Blowers, 2010). Most importantly, compassion stands at the core of eastern Buddhist philosophy, being integral to the Buddhist understanding of reality and to its conceptualization of suffering.

According to Buddhist teachings, any human being seeks to avoid suffering and reach happiness. Cessation of suffering is considered the highest state of happiness, what Buddhists call *nirvana*, whereas being hostage of suffering and delusion is called *samsara*. In this scenario, the mind plays a primary role as it is responsible for creating the suffering we experience and live in. Indeed, in Buddhism happiness and suffering are considered states of mind rather than the product of some independent existing cause, external to us (Dalai Lama, 2001). But, if so, how can people reach the liberated state of mind of *nirvana* and be free from suffering? The answer lays in reaching a true insight of reality, and compassion is an integral part of this path. Indeed, in Theravāda Buddhism compassion (*karuna*) is considered one of a series of virtues –The "Four Immeasurables"–, also including loving kindness (*metta*), joy (*mudita*), and equanimity (*upekkha*). According to Buddhist tradition, people can cultivate these virtues that, when acquired, progressively lead to the path to *nirvana*. For instance, one can start with the cultivation of love, first toward oneself, then to a dear one, a neutral person, a difficult one, and finally to all human beings. Following, there is the cultivation of compassion, based on the wish that all human beings

are free from suffering. Joy is subsequent, with the capability to take delight of happiness and success of all people. Finally, one can reach equanimity, the impartial perception that all beings are equal and alike in their search and wish for happiness. Training the mind on these virtues is related to the development of a stable and joyful mindset, based on concentration and absorption.

1.2. Compassion in scientific research: Toward a five-facet model of dispositional compassion.

Despite compassion is an ancient construct, whose roots lie in the Buddhist philosophical tradition, this topic has been rather unexplored in scientific research for a long time and became a matter of interest for scholars only in the past few decades. In particular, research investigating compassion has flourished in several areas of psychological research, going from clinical psychology (Gilbert, 2020), to neuroscience (Singer & Klimecki, 2014), up to social (Condon & DeSteno, 2017) and organizational psychology (Kanov et al., 2004).

The growing interest in compassion led the scientific community to find proper ways to conceptualize this construct, not without struggles. Indeed, through the years scholars provided many definitions of compassion, often lacking consensus among each other. For instance, authors like Lazarus (1991) and Goetz et al. (2010) focused on the affective and behavioural elements of compassion, defining it as the feeling arising when witnessing other's suffering, paired with the subsequent wish to help and relieve it. Other authors, such as Kanov et al. (2004) and Gilbert (2009), also incorporated a cognitive component to the definition and were among the first to propose a multifaced structure of the construct. According to Kanov et al. (2004), compassion entails three components: the ability to be aware of others' suffering (i.e., "noticing"), the ability of being emotionally resonant, through empathic concern and perspective taking (i.e., "feeling"), and the motivation to act to reduce such suffering (i.e., "responding"). As for Gilbert (2009), compassion is "a deep awareness of the suffering of another coupled with the wish to relieve it" (p.13). Gilbert conceptualizes it as a motivational system with an evolutionary origin, divided in six attributes. The first attribute is "sensitivity", meaning being responsive to others' emotional states

and needs; the second, “sympathy”, and the third, “empathy”, are the ability to show concern and relate to others’ suffering, whereas the fourth element, “motivation”, entails the willingness to act in order to help others who are in pain. The fifth attribute is “distress tolerance”, namely the ability not to be overwhelmed by nor to over-identify with others’ suffering; “non-judgement” is the sixth attribute and corresponds to the ability to be tolerant and accepting toward suffering targets, regardless of how we value them. Finally, basing on Neff’s (2003a) model of self-compassion, Pommier (2010) proposed a multidimensional definition of compassion, according to which compassion involves three elements: kindness, mindfulness, and common humanity. The first two elements respectively match with Gilbert’s “distress tolerance” and “non-judgement” attributes, whereas common humanity entails the idea that one’s suffering is part of the common human experience, thus all persons can relate to it.

Importantly, even though they may differ from each other, these definitions all share several key points: first of all, the fact that compassion is an other-oriented emotion, strictly tied to sociality. Indeed, people experience compassion only when knowing the experience of other individuals. Second, most of the definitions underline the “active” component of compassion: experiencing compassion does not only mean being moved by others’ suffering, but requires an authentic desire to alleviate it. Third, all the listed definitions draw attention to the fact that suffering is a key component of compassion and can indeed be defined as its trigger.

Despite the multiple features shared by the above-mentioned definitions, the inability to agree on a mutual definition of compassion remained a problem for the scientific community, preventing researchers to study compassion properly due to problems related to its conceptualization and its measurement. In 2016, Strauss and colleagues finally tried to address this issue. In their work, the Authors summarized existing definitions of compassion in order to reach a more complete conceptualization of this construct, which they defined as the “awareness of someone's suffering, being moved by it (emotionally and, according to some definitions, cognitively), and acting or feeling motivated to help” (Strauss et al., 2016, pp. 17-18). Moreover,

the authors proposed a five-facet model of compassion that covered all the key features of the construct, included in the above-mentioned definitions. The model –which could be applied also to self-compassion– included the ability to recognize signs of suffering in others ("Recognizing"), that of understanding that suffering is a universal human experience ("Understanding"), the tendency to be emotionally resonant and to connect with others' distress ("Feeling"), the ability to tolerate the uncomfortable feelings that may arise when witnessing others' suffering ("Tolerating"), and the motivation to act in order to alleviate suffering ("Acting").

1.3. Compassion and Empathy: two sides of the same coin?

For a long time, compassion and the affective component of empathy (i.e., empathic concern) were considered overlapping constructs and used interchangeably (e.g., Jordan et al., 2016; Batson, 1991). Indeed, being both other-related constructs that are triggered by others' states and feelings and being characterized by feelings of concern for other people's welfare, it might be easy to assume that the two are equivalent. However, despite their similarities, empathy and compassion are well-distinguished one to another and, through the years, scholars progressively acknowledged their differences.

Importantly, the first distinction between the two construct lies in their theoretical definition. As aforementioned, empathy is a multi-dimensional construct with a cognitive and an affective component (Davis, 1983) and is defined as "the power of mentally identifying oneself with (and so fully comprehending) a person or object of contemplation" (Oxford English Dictionary). The cognitive component of empathy (i.e., perspective taking) lies in the ability to take others' perspective and intellectually understand their emotions, whereas its affective side (i.e., empathic concern) is the ability to vicariously share those emotions.

Empathy and compassion do not simply differ in their theoretical conceptualization, and scholars outlined several other differences (see Singer & Klimecki, 2014; DeSteno, 2015; Strauss et al., 2016). First of all, people can empathize with positive and negative feelings alike: one can vicariously share someone's happiness, joy, or excitement, as well as his or her sadness, pain, or

suffering. Compassion instead, is a specific reaction to others' suffering, and cannot be triggered by positive emotional states. Second, and as discussed above, empathy entails the ability to share others' people feelings – either cognitively or affectively– meaning that when people empathize with someone, their feelings are merged with what the other person is feeling (or at least with their own inference of it). Differently, compassion is not vicarious: it is felt and shaped by people's reactions to the suffering of another, it is feeling *for*, not feeling *with* a target. Therefore, when people feel compassion for someone, they do not directly share his or her emotional states, but feel emotions of their own, which do not perfectly match those of the target and are characterized by feelings of warmth, concern, and care for the suffering other. Third, given that –when feeling compassion– a distinction between the self and a suffering target's emotional state is preserved, compassion is less likely to turn into personal distress. Indeed, a perfect match with the feelings of a suffering target could generate responses of avoidance in those witnessing, who might step back in order not to feel too overwhelmed by his or her suffering. Compassion, instead, entails the ability to tolerate the distress which arises when stating others' suffering, and to respond effectively to it. Finally, the ability to act or, at least, being motivated to act in order to reduce others' suffering, is the fourth component that distinguishes compassion from empathy. Indeed, even though empathic reactions can lead to prosocial behavior, the above-cited personal distress that may arise from an excessive sharing of suffering can inhibit helping behaviors (Singer & Klimecki, 2014).

Importantly, disentangling the relationship between empathy and compassion has been a matter of interest both for scientific research and contemplative traditions. Eventually, both areas agreed on the fact that empathy is an antecedent to compassion (e.g., Kanov et al., 2004; Dalai Lama, 2005). Indeed, being empathically concerned for someone suffering is a prerequisite to feel compassion, yet it is insufficient for prosocial outcomes: when this concern evolves into compassion, its additional components allow people to react properly to others' suffering and behave prosocially.

This assumption received empirical support by Lim and DeSteno (2016). In two studies on the role of past adversities, the authors tested via structural equation model the links between adversity, dispositional empathy (i.e., empathic concern and perspective taking), dispositional compassion, and prosocial behavior (i.e., a behavioral measure of charitable donation). Results of the first study showed that the severity of past adversity was positively associated with both perspective taking and empathic concern; the latter, in turn, was associated with increased dispositional compassion, which was related to increased charitable donations. Importantly, dispositional compassion fully mediated the relationship between empathic concern and charitable donations, proving to be the primary driver of prosocial behavior. These results were replicated and expanded in a second study, which also took into account state compassion. This time, both perspective taking and empathic concern predicted dispositional compassion, which led to greater state compassion and, in turn, to increased prosocial behavior (i.e., time spent assisting a confederate in completing a boring task).

1.4. Finding proper ways to measure compassion

Compassion is both state-like and episodic, as well as a trait-like individual disposition, and can be increased and cultivated through trainings and mediation practices (e.g., Leiberg, et al., 2011; Klimecki et al., 2014; for a review see Quaglia et al., 2020). Regarding compassion as a disposition, research has struggled to find proper ways to assess it. In their 2016 work, Strauss and colleagues –beyond providing the above-mentioned five-facet definition of dispositional compassion– highlighted the limitations of the existing self-report measures that systematically failed in tapping all the components of the construct. To overcome the limitations of self-report measures of dispositional compassion published until 2016, in 2020 two new measures were proposed: the 20-item Sussex-Oxford Compassion Scale – toward Others (SOCS-O; Gu et al., 2020) and the 16-item Compassion Scale (CS; Pommier et al., 2020). These scales have the strength to be multidimensional, thus allowing both the assessment of a general compassionate disposition and of its facets. Psychometric analyses of the SOCS-O yield support for a hierarchical factorial

structure of the scale, with five subscales – in turn loading on an overall compassion factor – corresponding to the facets of Strauss and colleagues' (2016) structure of compassion (i.e., Recognizing, Understanding, Feeling, Tolerating, and Acting). The CS instead includes four subscales, which are related to Strauss et al.'s (2016) compassion structure in this way: Lack of indifference (in part) and Kindness correspond to the ability to feel empathy for others' suffering and being motivated to alleviate it; Common Humanity is the understanding of the universality of suffering; Lack of indifference (in part) and Mindfulness represent the ability to recognize suffering and tolerate the uncomfortable feelings it may generate. As for the SOCS-O, the CS has a multidimensional bifactorial structure, whereby items load both on the four subscales and on a general compassion factor.

1.5. Trait-like and state-like compassion in Social Psychology

As previously discussed, the interest in compassion is progressively flourishing in several domains of psychological research, including social psychology. Indeed, being an other-oriented emotion that is triggered by suffering, compassion is a powerful tool in the study of interpersonal dynamics related to prosociality and help. On the one side, social psychologists explored the role of compassion as an individual disposition linked to positive interpersonal outcomes; on the other side, they aimed to identify situational factors that can influence state-like compassionate responding.

Given that compassion implies feelings of kindness and closeness toward other people, even strangers, its relationship with positive other-oriented dispositions seems straightforward. In fact, dispositional compassion was found positively associated with empathy (Gu et al., 2020; Pommier et al., 2020), social connectedness (Pommier et al., 2020), prosocial tendencies, and helping behavior (Seppälä et al., 2017).

Consistent with this evidence, Crocker and Canevello (2008) showed that a compassionate disposition supports the development of new relationships based on cooperation and trust. In a longitudinal study involving first-semester college freshmen, the Authors found that participants prioritizing compassionate goals (i.e., aimed at supporting the well-being of others without

obtaining personal benefits) vs. self-image goals (i.e., motivated by self-interest) provided more support to others. Interestingly, participants endorsing compassionate goals were not only perceived as more supportive, but they also *felt* more supported by their friends and significant others. These results suggest that having a compassionate disposition can promote a virtuous circle of cooperation, support, and trust between the self and the others and an overall increase of psychological well-being. Consistently, it is worth mentioning that dispositional compassion is linked to positive patters also at the individual level: it was found to be negatively related to stress (Gu et al., 2020) and fear of compassion for others (Pommier et al., 2020), and positively associated with mental well-being (Gu et al., 2020), emotion regulation (Jazaieri et al., 2014), self-esteem (Mongrain et al., 2011), and dispositional mindfulness (Gu et al., 2020; Pommier et al., 2020).

As for state-like compassion, early research on people's contextual reactions toward others' suffering "begins with notorious examples of human failures to act compassionately" (Condon & DeSteno, 2017, p. 372). Indeed, for a long time, social psychologists mainly focused on the situational factors that can hinder compassionate and helping responses, such as nonresponsive bystanders (Darley & Latané, 1968), the tendency to obey authority (Milgram, 1963), and time pressure (Darley & Batson, 1973). Through the years, researchers progressively shifted their interest also on the possibility to increase people's compassionate responses, with the aim of understanding under which conditions people are more likely to feel compassion and, consequently, act prosocially. For instance, Valdesolo and DeSteno (2011) showed that similarity can foster compassion, even when considering subtle cues of affiliation. In their study, participants who completed a motor synchrony paradigm (i.e., listening to an audio clip and tapping the beats that they were hearing while coordinating with a confederate) fostered more compassion, compared to when participants' movements were not coordinated with those of the confederate. Importantly, the Authors also tested a mediation model showing that increased compassion, evoked by the motor synchrony paradigm, increased following altruistic behavior toward a confederate assigned to complete a difficult and long task. The effect of similarity opens discussion upon another

phenomenon that increases compassion, namely the "identifiable victim effect". Indeed, a large body of literature has demonstrated that people are more responsive to a single individual in distress rather than to the distress of multiple targets. This effect holds equally when those individuals are either part of a large, unidentified group of sufferers (e.g., Friedrich & McGuire, 2010) or when they are multiple separate targets, simultaneously presented (e.g., Cameron & Payne, 2011). The explanation behind this phenomenon lies on the fact that our minds are less sensitive to numbers (i.e., "statistical pain"), whereas it is easier to relate to the suffering of a single target, which is more likely to evoke a sense of shared humanity (Jenni & Loewenstein, 1997).

Importantly, another situational factor that affects compassionate responding is people's socio-economic status. Multiple correlational and experimental studies found that individuals from higher (vs. lower) social class backgrounds experience less compassion and behave less prosocially (for a review; see Piff & Moskowitz, 2017). However, the compassion gap experienced by upper-class individuals can be addressed through psychological interventions, such as reminding participants of the needs of others (e.g., Piff et al., 2010). These interventions attenuate the tendency of higher status participants to be more self-focused and less attentive to other people in the social environment. Importantly, also endorsing a perception of interdependence seems to be related to the magnitude of one's compassionate experience. Indeed, both having an interdependent self-construal (Singelis, 1994) and a collectivistic worldview –two assets which allow people to perceive themselves as part of a whole– were found to be associated with higher compassion and sympathy, in participants coming from both traditionally collectivist and individualistic societies (Dalsky et al., 2008; Uchida & Kitayama, 2001). Finally, scholars explored the possibility of developing concrete interventions aimed at enhancing positive emotional and behavioral responses toward suffering targets. Those interventions (usually meditation-based protocols; for a review see Skwara et al., 2017) were found to be effective tools in fostering compassionate and prosocial responses and will be discussed in detail in the following chapters.

To summarize and conclude, social psychologists study compassion both as a state-like reaction that can be triggered by specifical situational factors and as a stable individual disposition. Nevertheless, an integration between these two approaches is still lacking and marks the agenda for future research on compassion. Indeed, given that both situational forces and traits or dispositions affect people behavior, it would be crucial to approach to the study of compassion adopting an integrated perspective, exploring how contextual variables and individual differences interact *combinedly* in determining people's willingness to respond to others' suffering.

Chapter 2: A deep-dive into the assessment of compassion (Study 1a, 1b, 1c)[1]

2.1. Aims and overview of the studies

The goal of this set of studies is to investigate in depth the construct of dispositional compassion, focusing on the two most recent multidimensional scales assessing it. First, we aim to validate the Italian version of the Sussex Oxford Compassion Scale toward Others (SOCS-O; Gu et al., 2020) and the Compassion Scale (CS; Pommier et al, 2020) and to test the factorial structure of these scales in an Italian sample, also trying to replicate the multidimensional structures of the original versions of the scales (Study 1a). In Study 1a, we also tested gender differences for SOCS-O and CS total scores, as well as for their subscales. Study 1a was a first necessary step for the following two because it allows us to verify that the factorial structures of the Italian SOCS-O and CS are similar to those of the original English versions. If this is the case, results of the following studies can be interpreted in relation to the construct of compassion, rather than being attributed to some peculiarities of the Italian scales.

Second, we aim to study – to our knowledge for the first time – the topology of dispositional compassion, testing the simultaneous links between SOCS-O and CS facets via network analysis (Study 1b). Network topology identifies the nodes (facets) having the greatest – or smallest – influence on the maintenance of compassion.

Third, we aim to assess the nomological net of dispositional compassion, by: testing the correlates, and convergent and discriminant validity, of the SOCS-O and the CS; comparing our results with the correlations found in the validation papers of the original (English) versions of the scales (Gu et al., 2020; Pommier et al., 2020); examining the differences between the SOCS-O and the CS in their relationships with correlates (Study 1c). Correlates (see Table 1) include positive other-oriented dispositions, well-being indicators, mindfulness, emotion regulation abilities, attachment styles, social desirability, individual characteristics related to self-evaluation, and dispositions related to compassion (i.e., self-compassion and fear of compassion for others). Some

correlations were already included in the original validations of the scales (Gu et al., 2020; Pommier et al., 2020), but many are novel[2].

2.2. Method

The Psychological Research Ethics Committee of the University of Padova approved the procedures of this study, protocol #3253.

Participants. Following recommendations for confirmatory factor analysis (Comrey & Lee, 1992), we aimed to have a total sample of at least 500 participants for the whole set of studies. Subjects were excluded if they showed missing values on at least half of the questionnaire (exclusion criteria established prior to data analysis). We finally relied on three convenience samples of Italian adults (Total N = 723), who were recruited from the general population by seven research assistants in three independent data collections. All respondents were informed about the study's purposes, the anonymity of their responses, and the possibility to withdraw at any time. Then, they completed online questionnaires individually and voluntarily, without receiving any compensation. The characteristics of the samples (Samples A, B, and C) are described in Table 1, together with the list of variables (besides CS and SOCS-O) measured in each sample, and their Cronbach's alpha. Each variable (excluding the CS and the SOCS-O) was collected only in one sample, to keep the number of correlation tests as low as possible.

Table 1. Characteristics of the samples, measures employed and their Cronbach's α

	Sample A *N* = 223	Sample B *N* = 228	Sample C *N* = 272
Women (%)	61.43%	59.65%	56.99%
Age (M, SD)	31.83 (13.04)	32.08 (13.63)	27.72 (9.71)
Employed	49.30%	57.14%	45.83%
Education			
Middle school	4.95%	4.82%	2.57%
High school	45.5%	53.51%	47.43%
Bachelor	25.23%	19.74%	27.21%
Master	24.32%	21.93%	22.79%
Measures (α)	ASQ: Secure Attachment (.70)	Self-compassion (.91)	FFMQ: Total score (.78)
	ASQ: Avoidant Attachment (.85)	Prosociality (.90)	Fear of compassion for others (.89)
	ASQ: Anxious Attachment (.87)	BIDR: Self-deceptive enhancement (.74)	IRI: Empathic concern (.72)
	PANAS: Positive affect (.90)	BIDR: Impression management (.67)	IRI: Perspective taking (.77)
	PANAS: Negative affect (.88)	Benevolence (.89)	IRI: Personal distress (.74)
	Social connectedness (.89)	Universalism (.86)	Perceived Stress (.79)
	Difficulties in Emotion Regulation (.94)		MLQ: Presence (.83)
			MLQ: Search (.91)
			Self-Esteem (.83)
			Labile self-esteem (.90)
			Psychological entitlement (.83)
			ERQ: Reappraisal (.78)
			ERQ: Suppression (.87)

Note. ASQ = Attachment Style Questionnaire; PANAS = Positive and Negative Affect Schedule; BIDR = Balanced Inventory of Desirable Responding; FFMQ = Five Facet Mindfulness Questionnaire; IRI = Interpersonal Reactivity Index; ERQ = Emotion Regulation Questionnaire.

Procedure and measures. Adopting a back-translation procedure, we translated the SOCS-O and CS items into Italian (translation in Appendix, Tables A1 and A2), with the support of a bilingual psychologist (English-Italian). Concerning the correlates of the SOCS-O and of the CS, when a validated Italian version of a scale was not available, items were translated adopting a forward and backward translation procedure, to preserve their original meaning.

Compassion. Across the three samples, we assessed dispositional compassion employing our Italian versions of the SOCS-O (Gu et al., 2020) and of the CS (Pommier et al., 2020). Responses were provided on a 5-point Likert-type scale in both measures. We computed both the subscales' scores (keeping CS Indifference reverse-coded, thereby measuring lack of indifference) and the total compassion scores. Table 2 reports means, standard deviations and Cronbach's alpha of SOCS-O and CS, and of their subscales.

Table 2. Cronbach's alpha, means and standard deviations of SOCS-O and CS subscales

		Sample A (N = 223)		Sample B (N = 228)		Sample C (N = 272)	
		Cronbach's α	**Mean (SD)**	**Cronbach's α**	**Mean (SD)**	**Cronbach's α**	**Mean (SD)**
SOCS-O	General factor	.94	3.81 (0.60)	.93	3.85 (0.58)	.94	3.83 (0.62)
	Recognizing	.90	3.58 (0.72)	.88	3.67 (0.74)	.88	3.67 (0.77)
	Understanding	.86	4.21 (0.75)	.89	4.23 (0.71)	.82	4.15 (0.75)
	Feeling	.83	3.77 (0.71)	.83	3.77 (0.75)	.83	3.79 (0.76)
	Tolerating	.75	3.64 (0.68)	.81	3.75 (0.64)	.73	3.71 (0.70)
	Acting	.88	3.84 (0.70)	.88	3.83 (0.73)	.89	3.82 (0.77)
CS	General factor	.88	4.00 (0.52)	.85	3.98 (0.52)	.88	3.95 (0.58)
	Kindness	.86	3.84 (0.75)	.85	3.83 (0.77)	.89	3.84 (0.82)
	Common Humanity	.85	4.23 (0.72)	.80	4.14 (0.74)	.81	4.04 (0.79)
	Mindfulness	.69	3.88 (0.60)	.70	3.94 (0.62)	.76	3.89 (0.70)
	Indifference-R	.71	4.04 (0.66)	.73	4.03 (0.74)	.80	4.02 (0.80)

Other-oriented dispositions. We administered the 20-item Social Connectedness Scale-Revised (Lee et al., 2001; Italian version, Capanna et al., 2013), the Prosocialness Scale for Adults (original and Italian version: Caprara et al., 2005), Benevolence and Universalism items taken from the Portrait Values Questionnaire (Schwartz et al., 2012), and the perspective taking, empathic concern, and personal distress dimensions of dispositional empathy taken from the Interpersonal Reactivity Index (IRI, Davis, 1983; Italian version: Albiero et al., 2006).

Well-being dimensions. We assessed positive and negative emotions with the Positive and Negative Affect Schedule (Watson et al., 1988; Italian version: Terracciano et al., 2003), subjective stress employing the Perceived Stress Scale (Cohen et al., 1983), and eudaimonic well-being with the Meaning in Life Questionnaire, which measures search for meaning and presence of meaning (Steger et al., 2006).

Mindfulness. Dispositional mindfulness was measured with the 24-item version of the Five Facet Mindfulness Questionnaire (FFMQ-SF; Bohlmeijer et al., 2011; Italian items from Giovannini et al., 2014).

Dispositions related to compassion. We administered the Self-Compassion Scale (Neff, 2003b; Italian version: Veneziani et al., 2017) and the 10-item subscale "Fear of expressing compassion for others" of the Fears of Compassion Scale (Gilbert et al., 2011; Italian version: Lucarini et al., in press).

Social desirability. We assessed self-deceptive enhancement and impression management, which are two components of social desirability, with the Balanced Inventory of Desirable Responding (Paulhus, 1991; Italian version: Bobbio & Manganelli, 2011).

Individual characteristics related to self-evaluation. Global self-esteem, labile self-esteem, and psychological entitlement were respectively assessed with the Rosenberg Self-Esteem scale (Rosenberg, 1965; Italian version: Prezza et al., 1997), the Labile Self-Esteem Scale (Dykman,

1998), and the Psychological Entitlement Scale (Campbell et al., 2004; Italian version: Boin & Voci, 2019).

Emotion regulation. The 16-item version of the Difficulties in Emotion Regulation Scale (Bjureberg et al., 2016; Italian items from Giromini et al., 2012) measured participants' difficulties in modulating their emotional reactions. The Emotion Regulation Questionnaire (Gross & John, 2003; Italian version: Balzarotti et al., 2010) measured reappraisal and suppression tendencies.

Attachment styles. We administered the Attachment Style Questionnaire (Feeney et al., 1994; Italian version: Fossati et al., 2003), which assesses secure, avoidant, and anxious attachment.

2.3. Results

Study 1a: Italian validation of the SOCS-O and the CS. To reach an adequate sample size for confirmatory factor analyses (CFA), we aggregated the three samples (N = 723)[3]. Mardia's test showed a deviation from multivariate normality, both for the SOCS-O (multivariate *skewness* = 3362.94, $p < .001$; multivariate kurtosis = 40.55, $p < .001$) and the CS (multivariate skewness = 2978.06, $p < .001$; multivariate kurtosis = 29.65, $p < .001$), suggesting the use of robust maximum-likelihood (MLR) or least-squares estimators. All factor analyses were performed with Mplus 7. Before running the factor analyses, we tested factor intercorrelations between the SOCS-O, the CS, and their facets. Intercorrelations among SOCS-O factors were all statistically significant (Table 3), consistent with the fact that the five factors are related elements of an overall compassion construct. Intercorrelations among Feeling, Tolerating, and Acting were high, in line with Gu et al. (2020; healthcare staff sample), who found a correlation of $r = .68$ between Feeling and Tolerating, of $r = .77$ between Feeling and Acting, and of $r = .74$ between Tolerating and Acting. As for the CS, factor intercorrelations were all statistically significant (Table 3), again consistent with the fact that the four factors are related elements of an overall compassion construct. Correlation patterns among first-order factors were similar to those found by Pommier et al. (2020), except for the relationship between Indifference and Common Humanity, which was rather modest in our sample, especially considering the sample size.

Table 3. Correlation coefficients between the SOCS-O, the CS, and their facets

		1	2	3	4	5	6	7	8	9	10
SOCS-O	1. General factor	—									
	2. Recognizing	.77***	—								
	3. Understanding	.75***	.53***	—							
	4. Feeling	.90***	.61***	.57***	—						
	5. Tolerating	.85***	.52***	.54***	.74***	—					
	6. Acting	.85***	.51***	.47***	.80***	.74***	—				
CS	7. General factor	.76***	.51***	.59***	.71***	.65***	.68***	—			
	8. Kindness	.72***	.43***	.42***	.73***	.64***	.77***	.86***	—		
	9. Common Humanity	.56***	.34***	.72***	.44***	.45***	.37***	.72***	.46***	—	
	10. Mindfulness	.71***	.59***	.51***	.62***	.60***	.58***	.82***	.69***	.57***	—
	11. Indifference-R	.27***	.17***	.10**	.31***	.24***	.31***	.57***	.37***	.09*	.21***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Subsequently, we tested the hierarchical structure (five factors loading on a higher-order compassion factor) of the SOCS-O found by Gu et al. (2020), employing the same estimator used by the authors, namely MLR. In this model, the residual variance of the latent factor Feeling was negative, which represents a nonadmissible parameter estimate (Chen et al., 2001). This issue may be due to the high correlation between Feeling and the general compassion factor ($r = .90$, $p < .001$; see Table 3), which was found also by the authors of the original scale ($r = .88$, $p < .001$; Gu et al., 2020). This is explained by the fact that Feeling, compared to the other factors, has on average stronger correlations with the other SOCS-O subscales. After inspecting modification indices and the text of items, we decided to correlate the errors of items 3 and 13, two semantically similar items of the Feeling factor, while testing again the hierarchical five-factor model. This corrected hierarchical model had no negative residual variances, and adequate fit indexes (CFI = 0.93; TLI = 0.92; RMSEA = 0.06; SRMR = 0.05; Table 4). All first- and second-order loadings (Table A1, Appendix) were significant at $p < .001$, but the loading of the Feeling factor on the general compassion factor was very high (> .99), consistent with the abovementioned fit issue. To be consistent with the analyses performed employing the original English versions of the scales, we also tested simpler models (i.e., five-factor, one-factor) which are reported in Table 4.

Importantly, given the high factor intercorrelations, we also tested factorial solutions in which two or more highly correlated factors were collapsed. Thus, we employed CFA to test two (one hierarchical, one non-hierachical) three-factor models in which items from Feeling, Tolerating, and Acting loaded on a single factor. Fit indexes of these models were very similar, yet slightly worse, compared to the hierarchical and non-hierarchical five-factor models (see Table 4). Even though all these alternatives had a satisfactory fit, we argue that the five-factor hierarchical solution is the best option. First, it matches each dimension of Strauss and colleagues' (2016) theoretical definition of compassion. Second, it allows a more balanced distribution of the items across the factors, whereas in the models with three first-order factors one factor has three times the items of the other two.

To replicate the original validation of the CS (Pommier et al., 2020), we performed a bifactor ESEM (four factors and a general factor) with the WLSMV estimator, which is specifically designed for ordinal items and non-normally distributed data (Flora & Curran, 2004). The model did not converge. In particular, the output showed that item 9 (Mindfulness) had negative residual variance. Then, we tested the bifactorial model again excluding item 9, but this time it was item 3 (Indifference) that showed negative residual variance. Thus, aiming to keep the same items as in the original scale and to obtain a factorial structure composed of the general compassionate disposition and its four underlying facets, we tested a hierarchical four-factor CFA with the WLSMV estimator. This hierarchical model had no estimation problems. Fit indexes were generally good (Table 4; CFI = 0.95, TLI = 0.94; SRMR = 0.07), except for the RMSEA, which was only suboptimal (0.09). First- and second-order loadings were all significant at $p < .001$ (see Table A2). As for the SOCS-O, we also tested simpler models (i.e., four-factor, one-factor), which are reported in Table 4.

Table 4. Fit indices for the factorial structures of the SOCS-O and the CS

Scale	Model	CFI	TLI	RMSEA	SRMR
SOCS-O	5 Factor-hierarchical	0.93	0.92	0.06	0.05
	5 Factors	0.94	0.93	0.06	0.04
	3 Factors-hierarchical	0.92	0.91	0.07	0.05
	3 Factors	0.92	0.91	0.07	0.05
	One Factor	0.75	0.72	0.12	0.08
CS	4 Factor-hierarchical	0.95	0.94	0.09	0.07
	4 Factors	0.96	0.95	0.08	0.06
	One Factor	0.78	0.75	0.19	0.14

Finally, to explore whether male and female participants differed in their self-reported level of dispositional compassion, we ran a sequence of t-tests with Welch's correction. Gender differences were tested for SOCS-O and CS total scores, as well as for their subscales. Results showed statistically significant differences, with women always reporting to be more compassionate than men. This pattern was consistent for both the SOCS-O and the CS total scores, and across each of their dimensions (see Table 5 for descriptive and t-tests statistics).

Table 5. Descriptive statistics and T-Tests with Welch's correction for gender.

	Group	N	Mean	SD	SE	t	df	*p*	Cohen's d
SOCS_O	F	428	3.97	0.52	0.03	7.83	541.04	< .001	0.62
	M	295	3.62	0.65	0.04				
SOCS_O.R	F	428	3.79	0.66	0.03	6.39	542.57	< .001	0.50
	M	295	3.43	0.81	0.05				
SOCS_O.U	F	428	4.31	0.64	0.03	5.12	529.27	< .001	0.41
	M	295	4.02	0.82	0.05				
SOCS_O.F	F	428	3.97	0.65	0.03	8.78	557.34	< .001	0.69
	M	295	3.49	0.78	0.05				
SOCS_O.T	F	428	3.80	0.62	0.03	4.86	567.62	< .001	0.38
	M	295	3.55	0.72	0.04				
SOCS_O.A	F	428	3.99	0.68	0.03	6.91	583.81	< .001	0.53
	M	295	3.61	0.76	0.04				
CS	F	428	4.11	0.48	0.02	8.52	562.65	< .001	0.66
	M	295	3.77	0.57	0.03				
CS.K	F	428	4.02	0.70	0.03	7.42	556.37	< .001	0.58
	M	295	3.58	0.83	0.05				
CS.CH	F	428	4.20	0.70	0.03	3.14	560.21	< .01	0.24
	M	295	4.02	0.83	0.05				
CS.M	F	428	4.02	0.56	0.03	5.78	529.98	< .001	0.46
	M	295	3.73	0.72	0.04				
CS.I	F	428	4.22	0.66	0.03	8.30	562.03	< .001	0.65
	M	295	3.76	0.78	0.05				

Note. SOCS_O.R is SOCS-O Recognizing; SOCS_O.U is SOCS-O Universality; SOCS_O.F is SOCS-O Feeling; SOCS_O.T is SOCS-O Tolerating; SOCS_O.A is SOCS-O Acting. CS.K is CS Kindness; CS.CH is CS Common Humanity; CS.M is CS Mindfulness; CS.I is CS Indifference reverse-coded (lack of indifference).

Study 1b: Network analysis of the facets of compassion. For network analysis we employed Gaussian Markov random field estimation using the graphical LASSO algorithm, and Extended Bayesian Information Criterion (EBIC; hyperparameter gamma set to 0.5) to select optimal regularization parameter (lambda). To ensure high specificity, we employed a threshold removing potentially spurious edges.[4] Nodes were placed according to the Fruchterman-Reingold ("spring") algorithm. The R (R Core Team, 2021) package *bootnet* (Epskamp et al., 2018) was employed.

Nodes are variables. Every edge represents the regularized partial correlation connecting two nodes that are conditionally dependent, given all other nodes in the network; the thicker the edge, the stronger the association. Psychological networks display links, possible multicollinearity, and predictive mediation; two variables (nodes) that are only indirectly connected, say X and Z via W, may be correlated, but any predictive effect from X to Z (or vice versa) is mediated by W (Epskamp & Fried, 2018). Figure 1 shows the network illustrating paths between the scores of CS and SOCS-O subscales. Continuous edges indicate positive relations, dotted edges negative relations. Edge weights are reported in detail in Table A3 (Appendix).

Figure 1. Network analysis of facets of compassion (CS and SOCS-O)

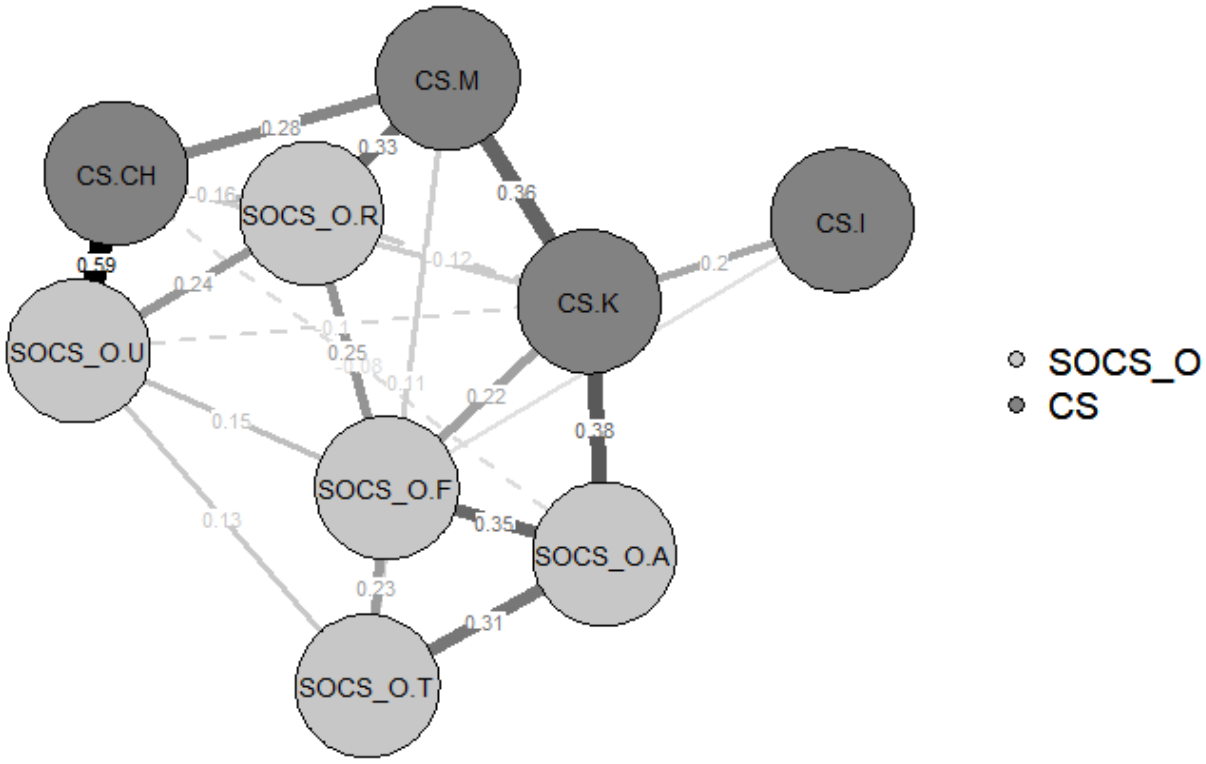


Figure legend. SOCS_O.R is SOCS-O Recognizing; SOCS_O.U is SOCS-O Universality; SOCS_O.F is SOCS-O Feeling; SOCS_O.T is SOCS-O Tolerating; SOCS_O.A is SOCS-O Acting. CS.K is CS Kindness; CS.CH is CS Common Humanity; CS.M is CS Mindfulness; CS.I is CS Indifference reverse-coded (lack of indifference).

Connections were fairly dense, but the network did not have the small-world property: its small-worldness value was 0.92 (threshold > 3.00, borderline between 1.00 and 3.00; Humphries & Gurney, 2008). Indeed, not all subscales were interconnected; SOCS-O and CS formed a consistent, but also widespread, picture of dispositional compassion. Importantly, SOCS-O and CS subscales did not aggregate in two separate clusters.

In this compassion network, the edge linking Common Humanity (CS.CH) and Universality (SOCS-O.U) was very strong, suggesting possible collinearity between the two. Kindness (CS.K) had quite strong associations with Mindfulness (CS.M) and Acting (SOCS-O.A), which in turn was strongly associated with Feeling (SOCS-O.F) and Tolerating (SOCS-O.T). We calculated four centrality measures: strength, which assesses how strongly (in absolute value) a node is directly connected to other nodes; betweenness, which measures how often a node is in paths between other nodes; closeness, which assesses how strongly a node is directly and indirectly connected to all the other nodes; expected influence, which assesses a node's influence within the network while distinguishing between positive and negative edges, unlike other centrality indexes. Results (Figure 2; see also Tables A3 and A4 in Appendix) showed that CS.K was the node with higher strength, betweenness, and closeness, whereas the most influential node was SOCS-O.F. Other important nodes were CS.M, SOCS-O.U, and SOCS-O.A. Nodes with lower centrality (expected influence and betweenness < 0) were SOCS-O.T, CS.CH, SOCS-O.R (Recognizing), and CS.I (Indifference reverse-coded); this last node was detached from all nodes except CS.K.

In network analysis, replicability, accuracy of estimates and sufficient sample size are of utmost importance (Epskamp et al., 2018). Edge-weight accuracy and stability of central indexes were satisfactory (see Figure A1 and Figure A2, Appendix), suggesting that the compassion network reported in Figure 1 is stable and reliable.

Figure 2. Centrality measures of compassion nodes

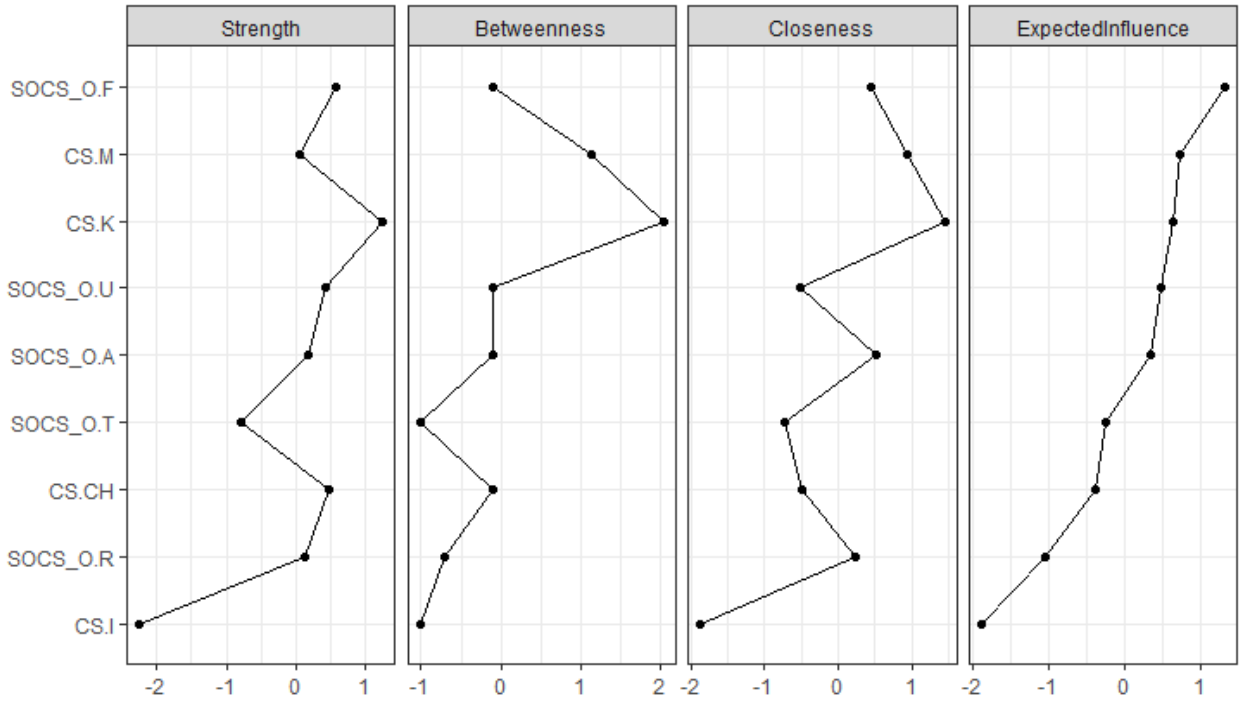


Figure legend. SOCS_O.R is SOCS-O Recognizing; SOCS_O.U is SOCS-O Universality; SOCS_O.F is SOCS-O Feeling; SOCS_O.T is SOCS-O Tolerating; SOCS_O.A is SOCS-O Acting. CS.K is CS Kindness; CS.CH is CS Common Humanity; CS.M is CS Mindfulness; CS.I is CS Indifference reverse-coded (lack of indifference).

Study 1c: Correlates of SOCS-O and CS. We employed the R packages *sjPlot* (Lüdecke & Lüdecke, 2015) and *cocor* (Diedenhofen & Musch, 2015), respectively to perform correlations and the significance test on their differences. Statistically significant differences between correlations were tested with a variant of Fisher's *r*-to-*z* transformation, designed for correlations based on the same sample (Hittner et al., 2003). Pearson correlations between the two compassion scales and the variables considered in this study are reported in Table 6.

Table 6. Correlations with the SOCS-O and the CS and correlation differences comparing the two scales

Scales	Samples	SOCS-O	CS	Differences	*z*	*p*
Other-oriented dispositions						
Social connectedness	A	.23***	**.36***	YES	-3.06	0.002
Prosociality	B	.57***	**.69***	YES	-3.38	0.001
Benevolence	B	.36***	**.51***	YES	-3.53	< 0.001
Universalism	B	.33***	**.44***	YES	-2.51	0.012
IRI: Empathic concern	C	.50***	**.60***	YES	-2.98	0.003
IRI: Perspective taking	C	.48***	**.58***	YES	-2.92	0.004
IRI: Personal distress	C	-.04	-.08	NO	0.97	0.332
Well-being dimensions						
PANAS: Positive affect	A	.08	**.18***	YES	-2.26	0.023
PANAS: Negative affect	A	**.26***	.15*	YES	2.24	0.025
Perceived Stress	C	.02	.02	NO	0.00	1.000
MLQ: Presence	C	.27***	.24***	NO	0.75	0.451
MLQ: Search	C	.38***	.31***	NO	1.82	0.069
Mindfulness						
FFMQ: Total score	C	.20***	.24***	NO	-0.99	0.320
Dispositions related to compassion						
Self-Compassion	B	.06	.00	NO	1.25	0.212
Fear of compassion for others	C	-.15*	**-.25***	YES	2.48	0.013
Social desirability						
BIDR: Self-deceptive enhancement	B	**.20***	.00	YES	4.20	0.000
BIDR: Impression management	B	.03	.04	NO	-0.21	0.835
Individual characteristics related to self-evaluation						
Self-Esteem	C	.17**	.23***	NO	-1.48	0.138
Labile self-esteem	C	-.00	-.09	YES	2.18	0.029

Psychological entitlement	C	-.02	-.08	NO	1.45	0.146
Emotion regulation						
Difficulties in Emotion Regulation	A	**.16***	.07	YES	2.03	0.043
ERQ: Reappraisal	C	.25***	.24***	NO	0.25	0.802
ERQ: Suppression	C	.02	-.06	NO	1.94	0.053
Attachment styles						
ASQ: Secure Attachment	A	.30***	.30***	NO	0.00	1.000
ASQ: Avoidant Attachment	A	-.07	**-.16***	YES	2.03	0.043
ASQ: Anxious Attachment	A	.22***	.19**	NO	0.69	0.492

Note. Stronger correlations for significant differences between the SOCS-O and the CS are displayed in bold; * $p < .05$, ** $p < .01$, *** $p < .001$. ASQ = Attachment Style Questionnaire; PANAS = Positive and Negative Affect Schedule; BIDR = Balanced Inventory of Desirable Responding; FFMQ = Five Facet Mindfulness Questionnaire; IRI = Interpersonal Reactivity Index; ERQ = Emotion Regulation Questionnaire.

Both SOCS-O and CS scores were positively related to all the other-oriented dispositions except personal distress, with stronger correlations for the CS. The positive correlations that the SOCS-O had with empathic concern and perspective taking, and that the CS had with empathic concern, social connectedness, and prosocial behavior, respectively replicated the correlational results of Gu et al. (2020) and Pommier et al. (2020). Gu et al. (2020) additionally found a negative, though weak, correlation between the SOCS-O and personal distress.

Concerning well-being, CS scores were positively – but weakly – related with both positive and negative affect, whereas SOCS-O scores were unrelated to positive affect, and more strongly – and positively – related to negative affect than the CS. Both compassion scales were also positively and not differently related to the composite score of the FFMQ, supporting the results of the original scales (Gu et al., 2020; Pommier et al., 2020), and to presence of and search for meaning in life.

Moreover, we did not find any link between compassion and self-compassion, not replicating the positive – though weak – correlation found by Gu et al. (2020) and Pommier et al. (2020), for the SOCS-O and the CS respectively. Both compassion scales were negatively correlated with fear of compassion for others, replicating the corresponding result by Pommier et al. (2020) for the CS.

Concerning social desirability, we found no relation between the compassion scales and impression management, and a positive correlation of the SOCS-O with self-deceptive enhancement. We did not replicate the positive – though weak – correlation between the CS and social desirability found by Pommier et al. (2020), who employed a different measure of the construct.

We also found a positive correlation of both compassion scales with self-esteem, and no correlation with labile self-esteem and psychological entitlement. The SOCS-O was positively and weakly related to difficulties in emotion regulation, whereas both scales were positively related to

reappraisal strategies. Such relations were not investigated in the papers validating the original versions of the scales (Gu et al., 2020; Pommier et al., 2020).

Both SOCS-O and CS scores were positively correlated with secure attachment, not replicating the lack of relationship between the CS and secure attachment found by Pommier et al. (2020). Avoidant attachment was negatively associated with the CS and unrelated to the SOCS-O, whereas anxious attachment was positively related to both compassion scales.

2.4. General discussion

The goal of this set of studies was to explore the construct of dispositional compassion and its measurement, through three specific studies: testing the factorial structure of the Italian version of the SOCS-O and the CS (Study 1a); identifying which facets of dispositional compassion stand at the core of the construct, via network analysis (Study 1b); understanding the nomological net of the scales, also examining differences in their relationships with correlates (Study 1c).

Concerning Study 1a, we found substantial support for the original factor structure of the scales and for second-order solutions aggregating first-order factors into a general dispositional compassion factor (Gu et al., 2020; Pommier et al., 2020). Except for the lack of convergence of bifactor analysis on the CS, factor structures of the SOCS-O and CS were replicated in the Italian population. However, we must acknowledge that our Italian validations are not trouble-free. Concerning the SOCS-O, the Feeling factor showed potential methodological issues concerning its residual variance and second-order loading, and was highly correlated with the other SOCS-O factors, especially Tolerating and Acting. Future research could try to address these methodological issues, and better disentangle the relationships among Feeling, Tolerating, and Acting. As for the CS, to avoid estimation problems we had to employ a slightly different methodology (i.e., hierarchical four-factor CFA) from the original validation. Nevertheless, not all fit indexes were equally good, as the RMSEA of the model was only suboptimal. Finally, Study 1a also explored gender differences in SOCS-O and CS total scores and in their subscales: women reported to be more compassionate than men throughout full scales and their respective dimensions. This result

replicates the findings of the authors of original versions of the SOCS-O and the CS (Gu et al., 2020; Pommier et al., 2020), as well as previous research showing that women are more prosocial and empathic than men (e.g., Xiao et al., 2019; Schulte-Rüther et al., 2008).

Regarding Study 1b, results provide novel insights into the topology of dispositional compassion, shedding light on the facets standing at the core of this complex and multifaced construct. We found that SOCS-O and CS facets formed a sparse network, suggesting that the dimensions composing such scales are specific, and form a broad – not a dense and tight – construct (Humphries & Gurney, 2008). Moreover, network analysis results showed that the core of dispositional compassion is made of concern, kindness, and care toward people that are suffering (CS Kindness and SOCS-O Feeling). This emotional core leans on the ability to tune in to (CS Mindfulness) and understand others' pain (SOCS-O Universality), and is connected to the urge of alleviating that pain (SOCS-O Acting). Experiencing a lessened indifference toward others' suffering (CS Indifference) is weakly related to the overall network of compassion, indicating the possibility to consider indifference in front of others' suffering as an independent construct.

Concerning Study 1c, results replicated and expanded the correlations found in the original validations of the scales (Gu et al., 2020; Pommier et al., 2020), providing support for the convergent and discriminant validity of the scales and for the other-focused, understanding, and caring nature of dispositional compassion. Interestingly, both compassion scales showed positive, though weak, relationships with negative affect and anxious attachment. These results are in line with previous research showing a positive relationship between empathy and anxious attachment (e.g., Trusty et al., 2005), and suggest that being sensitive to other people's suffering involves a certain level of concern and worry for them, as well as potentially negative feelings (e.g., compassion fatigue; Seppälä et al., 2017). But compassion could also help dealing with such negative feelings, as suggested by its positive correlation with reappraisal strategies and its lack of relation with personal distress (i.e., anxiety in front of the others' pain). Moreover, we found that dispositional compassion was positively associated with meaning in life, suggesting that

compassion is more associated with personal fulfilment, self-realization, and inner growth, than with hedonistic forms of well-being.

Importantly, the CS and the SOCS-O showed largely similar correlation patterns, thereby supporting the consistency between the scales, but also some differences, in terms of both general correlation patterns and strength of such relations. On the one hand, only the SOCS-O was positively correlated with some problematic tendencies, such as difficulties in emotion regulation and self-deceptive enhancement. Compared to the CS, the SOCS-O also showed stronger positive relationships with negative affective states. These results suggest that the SOCS-O may detect some downsides of compassion. On the other hand, only the CS was negatively related to avoidant attachment, and positively related to positive affect. Moreover, the CS, compared to the SOCS-O, had stronger and positive relationships with positive other-oriented dispositions, and a negative and stronger relationship with fear of compassion for others. All these results suggest that the CS is associated with more positive patterns. Overall, this comparison provides an insight into the peculiarities of the two scales and suggests the possibility to administer them both, to detect different sides of the construct of compassion.

This set of studies has at least three potential limitations that need to be acknowledged. First, relying on convenience samples may limit the external validity of the results, which should be replicated in a more representative sample. Second, we only employed self-report measures, which are often sensitive to response biases; related to this point, compassion scales may be particularly subject to social desirability (Paulhus, 1991). We did not find strong links between compassion scales and social desirability in our correlational analyses, but this issue might not be captured by self-reported social desirability scales and may need further investigation. Third, we had to apply minor changes to the factorial analyses employed by the authors of the two compassion scales, without changing the general structure. This could suggest that there might be some specificities, or even some cultural nuances, in compassion items and in their meaning. Indeed, even though compassion has an evolutionary origin, suggesting its universal nature across cultures, it can be

expressed in different ways according to cultural habits (Goetz et al., 2010). Validations in other languages and contexts are needed to properly explore the international and intercultural validity of compassion scales.

As for the SOCS-O and the CS, we must acknowledge that both scales have strengths and weaknesses. First, the SOCS-O assesses dispositional compassion only via positive items: the lack of reverse-scored items might promote response biases. Second, the Feeling, Tolerating, and Acting factors have higher intercorrelations, compared to the remaining two factors, i.e., Universality and Acting. These high factor intercorrelations may explain why the loadings of these facets – especially Feeling– on the general compassion factor were very high, and the abovementioned convergence issues. Moreover, high factor intercorrelations may suggest a too high number of factors in the model. For this reason, we also fitted two factorial solutions in which Feeling, Tolerating, and Acting were collapsed. As discussed above, these models were satisfactory, yet raised some concerns regarding the distribution of the items across the three factors, and the impossibility to match all the dimensions theorized by Strauss and colleagues (2016) in their definition of compassion. For this reason, we suggest to keep the hierarchical five-factors solution. Nevertheless, we encourage future researchers to explore the possibility to test a three-factor model in which some items of Feeling, Tolerating, and Acting are dropped, in order to have a more balanced version of the three-factors solution of the scale.

Third, the SOCS-O seems to detect some negative downsides of being highly compassionate. This topic has been widely explored in research on compassion fatigue, thus the SOCS-O might be a useful tool to assess negative feelings or exhaustion within compassionate reactions, a phenomenon that frequently occurs in the caring context (e.g., Seppälä et al., 2017).

As for the CS, the fact that the Indifference factor is composed of all reverse-scored items might attenuate response bias issues. Nevertheless, given that negatively-worded items load on one single factor, and that Indifference is a distal facet in the topology of dispositional compassion, response biases might still be an issue. Moreover, as previous literature on self-compassion suggests

(e.g., Muris et al., 2021), the presence of factors composed of reverse-scored items can artificially inflate correlations between the scale and other constructs, especially those with a negative or maladaptive connotation. Therefore, Indifference might inflate the correlations of the CS with the other variables included in the study, while representing a different concept that is not the opposite of compassionate responding[5]. Additionally, Indifference might be a method factor: its items may load on the same factor not because they represent a single construct, but because they are the only ones with negative wording in the CS scale.

Considering the strengths of the CS, we acknowledge that, compared to the SOCS-O, factor intercorrelations between CS facets were not too high, and the CS tends to be associated with several positive processes; therefore, it might be an appropriate tool to detect the individual and interpersonal benefits of being compassionate. In conclusion, the SOCS-O and the CS represent a strong progress in the measurement of dispositional compassion: they are two valid instruments, built on a clear theoretical definition of the construct, and able to portray its multidimensional nature. Importantly, the fact that the SOCS-O and the CS seem to detect different nuances of the multidimensional construct of dispositional compassion prevents us from suggesting the use of a scale instead of the other. On the contrary, we advise that scholars carefully choose which scale to administer according to their study's purposes. Given strengths and weakness of both scales and the fact that, in this thesis, we are interested in assessing the beneficial effects of being dispositionally compassionate at the interpersonal level, we decided to employ the CS in the following studies of this project.

Footnotes

[1] The content of this chapter is presented in Lucarini et al. (2022).

[2] In study 1c, to better understand the nomological net of the two compassion scales, we also explored the relationships between the abovementioned correlates and the facets of the SOCS-O and the CS (analyses reported in Appendix, Table A5).

[3] Preliminary analyses for the SOCS-O and the CS on the aggregated sample are reported in Appendix.

[4]The threshold removes elements of the precision matrix that are below (log(p*(p-1)/2))/sqrt(n), both before EBIC computation and in final model.

[5] In light of this evidence, we also tested a two-factor CFA, with Indifference (reverse-scored) items loading on one factor, and positive items loading on the other factor. The model converged, but fit indexes were unsatisfactory (CFI = 0.88; TLI = 0.86; RMSEA = 0.14; SRMR = 0.11), indicating that this factorial structure is not a valid alternative to the four-factor hierarchical solution.

Chapter 3. Targets' characteristics shape emotional and prosocial responses: what is the role of dispositional compassion?

3.1. Targets' characteristics affect emotional and prosocial reactions.

Nowadays, even in non-religious fields, people still strongly endorse the image of the "Good Samaritan", an allegory of the importance of helping and loving others as themselves. Indeed, ever since the Gospels and before, being resonant and merciful in front of the suffering of others has been highlighted as a core value in our society. However, values do not always match actual behaviors, and across old and contemporary history –as well as in everyone's lives– there are countless moments in which suffering targets are denied of help. Understanding how people determine whether someone is worthy of help or not is a question that haunted philosophers, theologians, and social psychologists for a long time. In the scientific field, researchers have widely elaborated upon the situational factors that influence helping behaviors, such as observing the event as a bystander (e.g., Darley & Latané, 1968), being under time pressure (Darley & Batson, 1973), or being influenced by authoritative figures (Milgram, 1963).

Importantly, those factors are not merely situational and extra-individual; people's choice to act prosocially or not is also influenced by the characteristics of the target person who is going through a suffering state. Indeed, there is a wide range of literature investigating how target-related factors affect empathic-related processes. Importantly, despite its already mentioned differences with compassion, empathy is also tied to altruistic actions, motivating (at least in part) helping behaviors. For this reason, studies taking into account empathic-related processes are a prolific basis to understand how the characteristics of a target affect people's emotional and prosocial reactions.

First of all, people's empathic processes seem to be affected by having had a similar experience to a target person. This result applies both to negative and positive life events. For instance, women who identified themselves as rape victims (compared to women who did not)

expressed more empathic concern for a woman describing her rape experience in a (fake) videotape. Differently, when the target of the videotape reported a negative experience unrelated to rape, no differences in terms of empathic concern were found between the two groups (Barnett et al., 1987). More recently, Eklund and colleagues (2009) corroborated this results in a correlational study showing that participants who read four stories related to fear and loss empathize more with the protagonist of each story, when they rate the situation similar to their own previous experiences. As for positive life experiences, Hodges et al. (2010) found that women who had just given birth to a child (compared to women pregnant of their first child and to women who had never been pregnant) reported greater empathic concern and understanding for new-mother targets reporting their experience in a videotape.

Another relevant factor for experiencing empathic feelings is group membership. Specifically, there is evidence of an in-group bias in empathic processing: people are more empathic toward members of their same (e.g., racial, social) group. For instance, Riva and Andrighetto (2012) showed that ethnic group membership affects the way people perceive others' pain. The authors found that participants tend to underestimate social pain (i.e., a variety of emotional reactions consequent of being humiliated, ostracized, excluded, or isolated) more than physical pain, when the target is an out-group member (either Chinese or Ecuadorian), rather than a member if their own ethnic group (i.e., Italians). Similarly, neuro-imaging studies supported this empathic bias for members of the same ethnic group: Xu et al. (2009) showed that observing painful stimulations applied to members of an ethnic outgroup (vs. members of the ingroup) decreased empathic neural responses, in both Chinese and Caucasian participants.

Finally, and particularly relevant for this thesis, another factor that affects empathic processing and helping is the valence attributed to a target or to their behavior. For instance, bystanders often fail to acknowledge or show concern for the pain experienced by people who have previously committed transgressive behaviors. In a study of Decety and colleagues (2010), participants were exposed to videotapes of individual expressing pain due to an ear disorder that

was caused either by a complication of a virus or by having AIDS. Participants were told that the patients with AIDS were either not responsible for their stigmatized condition (i.e., infected blood transfusion), or that the disease was a consequence of their irresponsible behavior (i.e., intravenous drug use). Results showed that participants were more sensitive toward AIDS transfusion targets, compared to non-AIDS and AIDS drug targets. Moreover, the more AIDS drug targets (vs. non-AIDS targets) were blamed, the less participants felt pain and empathy for them, when exposed to their distress. Similar results were found by Batson and colleagues (2007), who highlighted the role of valuing the welfare of the person in need. Specifically, in their second study, the authors exposed participants to the (fictious) story of a target who was seriously injured after being hit by a car because he was late and running. In one condition, participants learned that the target behaved nicely: he was late because he stopped to help a lost and confused elderly woman ("High Valuing" condition). In a second condition, the target was nasty to the elderly woman, being verbally and even physically rude to her ("Low Valuing" condition). In the control condition, participants received no information about why the target was late. Results of this study showed that when the suffering target behaved negatively (vs. positively vs. control) people experienced fewer empathic reactions and helping intentions toward him, even though he was equally perceived to be in clear need in each of the three conditions.

Finally, there is only one set of studies from Stellar et al. (2014) that tested the effect of the valence of a target on compassion-related processes, at least to our knowledge. First, participants read a short story about a target with egoistic or cooperative qualities; then they were exposed to his suffering. Compassion was assessed employing both self-report (i.e., list of emotions) and physiological measures (i.e., decreased heart rate and greater respiratory sinus arrhythmia activity). Results were consistent with those found in the studies on empathy, outlined above: the egoist target evoked less compassion than the non-egoist target, both at the physiological and at the self-reported level.

3.2. The role of compassion

As discussed in Chapter 1, compassion is an other-oriented emotion entailing concern, kindness, and care toward others, which acknowledges others' suffering as part of the universal human experience. For this reason, when people are compassionate, their tendency to be responsive to others' states and needs should be activated regardless of the characteristics of the target person who is suffering. In light of those peculiarities of compassion, we argue that a compassionate attitude could buffer people's tendency to react poorly to the suffering of a target who behaves in a negative, non-normative, and transgressive way (Batson et al., 2007).

Current scientific evidence that supports this idea is scarce and does not take into account dispositional compassion, at least to our knowledge. Despite this gap in the literature, there are a few studies that are encouraging first steps in support of our idea. First of all, even though no study assessing people's reactions to the suffering of negative targets takes into account the role of dispositional compassion, there are promising results concerning dispositional empathy. In their first study, Weng and colleagues (2015) examined the association between individual differences in empathic concern (assessed with the IRI subscale; Davis, 1983) and altruistic helping or punishment behavior in individuals witnessing an unfair transaction. Results showed that empathic concern was associated with helping the victim, but not to punishing the transgressor. Moreover, among those participants who chose to punish the transgressors, those who scored high in empathic concern punished less. This result support our hypothesis because, as stated in Chapter 1, empathic concern is a precursor of compassion (see Lim & DeSteno, 2016). Therefore, being highly concerned for others not only promotes prosocial actions, but might also mitigate punishment of transgressors.

Additionally, there are other studies taking into account compassion –even though not at the dispositional level– that might support our hypothesis. For instance, a compassion induction was found to work as a counterweight for punishment and revenge toward individuals who transgressed without seeking forgiveness for their actions. When participants were exposed to an individual cheating to obtain a financial reward and received a compassion induction, they tended to punish

the transgressor less, compared to when they received a neutral emotion induction (Condon & DeSteno, 2011). In a similar vein, in their review Singer and Steinbeis (2009) argue that, in case of norms violations, a compassionate attitude could lead people to understand the causes behind the non-normative behavior, promoting dialogue rather that fostering a desire for revenge and punitive actions. Additionally, there is evidence that Buddhist meditation fosters a motivation for compassionate acts, by reducing motives to cause harm to others. When exposed to a target provoking them, participants assigned to a mindfulness-based meditation program (vs. active control group) were less aggressive toward him, even though they experienced the same levels of anger of controls (DeSteno et al., 2018). Finally, also evidence from the clinical field seem to prove the potentiality of compassion. vanOyen Witvliet et al. (2015) examined the effect of practicing reappraisal strategies based on compassion (vs. emotional suppression strategies) on participants asked to recall a personal offence. Results showed that only compassionate reappraisal strategies increased empathy and emotional forgiveness toward the offender.

3.3. The Buddhist perspective: compassion toward close friends and enemies

On the one side, the idea that being compassionate entails a non-judgmental and tolerant attitude toward suffering others, even when they are somehow perceived negatively, has not yet received strong empirical support. On the other side, however, it is a solid concept rooted in Buddhist philosophy. In one of his books, the Dalai Lama himself argues that "a compassionate attitude toward others does not change even if they behave negatively" (Dalai Lama, 2001, p. 21). Indeed, according to Buddhism, compassion does not simply entail an emotional response toward the suffering of others; it is also a firm commitment based on reason. In other words, when people experience genuine compassion toward someone, their projections and expectations of that person are put aside in favor of care and attention to the person's needs.

Yet, how can one detach from their own projections and expectations? Buddhists believe that truly compassionate people can do it because they perceive all individuals as human beings who share the same rights and desires as oneself: to be happy and to avoid suffering (Dalai Lama,

2001). Understanding that all humans experience suffering that they wish to overcome (even though in different forms and at different moments of their lives), fosters closeness toward others, whether they are perceived as friends or enemies, good or bad, merciful or ruthless. As long as we embrace the idea that everyone experiences pleasure and pain just as ourselves, we acquire a different perspective on other people: the categories we put them in, as well as the logical basis to discriminate them, become superficial and fade.

Importantly, this idea of the universality of suffering has also been widely acknowledged by scientific literature (e.g., see Strauss et al., 2016) and operationalized in measures assessing dispositional compassion. At the theoretical level, Feldman and Kuyken (2011) elaborated upon the role of compassion in a review on mindfulness-based approaches. The authors state that compassion is "an orientation of mind that recognizes pain and the universality of pain in human experience and the capacity to meet that pain with kindness, empathy, equanimity and patience" (p. 145). At the empirical level –as stated in Chapter 1–, both the Sussex-Oxford Compassion Scale– toward Others (Gu et al., 2020) and the Compassion Scale (Pommier et al., 2020) tackle this component of compassion, respectively through the "Universality" and the "Common Humanity" dimensions of the two scales.

Chapter 4. Dispositional Compassion and norms transgressions related to Covid-19 (Study 2)

4.1. Aim and Hypotheses

The present work focuses on compassionate and prosocial reactions experienced toward suffering targets, in the context of norms transgressions. Starting from Batson and colleagues' (2007) findings, our first aim was understanding whether the portrayal (egoistic vs. altruistic vs. neutral) of a transgressor affects peoples' compassionate and prosocial reaction to his suffering. Moreover, this work also explored the role of dispositional compassion: we aimed to investigate –to our knowledge, for the first time– whether having a compassionate attitude buffers people's responses to the suffering of a negatively perceived target.

Importantly, data of this study were collected in Spring 2020, during the first wave of SARS-CoV-2 that affected Italy and the world. In that period, to counteract the growing pandemic of SARS-CoV-2 and the consequent massive health crisis, the Italian government imposed strict mobility restrictions and a national lockdown. All non-essential shops, schools, restaurants, bars, theatres, cinemas and businesses were temporary closed and the Italian population was not allowed to leave their homes, except for important necessities related to work or health circumstances. Given the delicate moment and the fact that the pandemic was dramatically salient in people's daily narratives, we decided to adapt this study to the situation, in order to preserve –as much as possible– its ecological validity. Therefore, our experimental manipulations were focused on Covid-related norms transgressions, specifically on violations of the lockdown imposed by the Italian government.

Importantly, this context was particularly suiting for running a study on norms transgression. Indeed, during the first SARS-CoV-2 outbreak, Italian citizens became extremely attentive to Covid-related norms adherence, often showing deep intolerance toward transgressors. People became increasingly hostile toward those who did not respect the norms (e.g., Scalia, 2021),

showing strong emotional reactions. In this context, a particular case concerned runners (i.e., people practicing jogging), who were often demonized both at the governmental and mediatic level (e.g., Simoni, 2020) and, in more than one case, even verbally and physically attacked by other citizens.

In light of this background, we developed our hypotheses:

H1: Participants will report fewer compassion and helping intentions toward a suffering target transgressing a Covid-related norm for egoistic (vs. control) purposes (H1a) and higher compassion and helping intentions toward a suffering target transgressing a Covid-related norm for altruistic (vs. control) purposes (H1b).

H2: The more participants are dispositionally compassionate, the more compassion (H2a) and helping intentions (H2b) they will report toward the target, regardless of the experimental conditions they are assigned to.

H3: High levels of dispositional compassion will buffer participants' tendency to report fewer compassion and helping intentions toward a suffering target transgressing a Covid-related norm for egoistic (vs. control) purposes.

4.2. Method

The Psychological Research Ethics Committee of the University of Padova approved the procedures of this study, protocol # 4211.

Participants Five research assistants collected a convenience sample of Italian adults recruited from the general population. Due to resources constraints, we did not establish the sample size a priori. Participants completed an online questionnaire individually and voluntarily. The survey was distributed on-line with snowball procedure, starting from the research assistants' social networks and from various social media groups unrelated to them. Data were collected from mid-April to early-May 2020. Prior to the data collection, we established three exclusion criteria. First, given that Covid was a crucial component in our experimental manipulations, participants were automatically excluded and could not complete the survey if they: a) were currently/got infected with SARS-CoV-2; b) had a family member or a close friend who was currently/got infected with

SARS-CoV-2; c) had a family member or a close friend who died of SARS-CoV-2. Second, participants were excluded when they failed the manipulation check question; and third, when they did not provide or refused post-experimental informed consent (N = 198; 5 participants withdrew their consent, the rest abandoned the survey). After excluding participants (initial N = 477) who did not meet our sampling criteria, the final sample included 227 participants (M=71, F=155; M_{age}=31.30, SD_{age}=12.97). Their occupations were as follow: 1.3 % were manual workers; 4.8 % were specialized workers, 26.9 % were retailers, employees, or primary-school teachers; 9.7 % were professionals, high school or academics; 52.4 % were students; and 4.8 % were retired, unemployed or housekeepers The rest of the sample did not report any occupation. As for the education, 5% attained middle school; 39% had a high school diploma; 38% had a Bachelor degree; and 19% got a Master degree or a PhD (the rest did not answer the question).

Procedure and Measures. As a cover story, we claimed that the aim of the research was to investigate participants' attitudes toward people going through a difficult time. At the end of the experiment, we debriefed and informed participants of the real purpose of the study, allowing them to further confirm or retrieve their consent. Participants were randomly assigned to read one out of three scenarios (between-participants design), written in Italian and presented as if they were allegedly published in a local newspaper (see Appendix for Italian original versions). Each of the three texts described in detail the same episode, allegedly occurred in late March 2020, namely an accident involving a fictious target (Luigi Schiavon) who was hit by a car and severely injured while he was violating the lockdown established by the Italian Government in Spring 2020. Specifically, the target violated a decree which did not allow Italian citizens to leave their homes for a distance larger than 200 meters, if not for urgent matters (e.g., medical reasons; grocery shopping for their family unit). We manipulated the reason behind the target's transgression: some participants learned that the target violated the decree with an *egoistic* purpose, namely going jogging, even though in that period it was not allowed to do that in Italy (i.e., Low Valuing condition; N = 86). Others learned that the target violated the decree with an *altruistic* purpose: he

was shopping groceries for some old people in the neighborhood who could not risk leaving their homes in such a difficult moment (i.e., High Valuing condition; N = 76). Additionally, we included a third condition in which participants received no information about why the target violated the decree (i.e., Control condition; N = 69). In the final section of the article (equal in the three condition), we underlined the target's suffering state and the physical and mental pain he was going through ever since his accident. Given that we were interested in assessing compassion toward the target, this section was crucial: as discussed in the previous chapters, in order to feel compassion toward someone, his or her suffering must be salient.

Then, participants answered to a manipulation check question, in order assess whether they paid attention while reading the scenario they were assigned to. In a multiple-choice question, participants were asked to recall what the target was doing while he was hit by a car. As a further check, we also included a single slider assessing participants' perception of the target's behavior ("How would you judge Luigi Schiavon's behavior?"; 0 = Egoistic, 10 = Altruistic). We then measured the dependent variables, using items specifically designed for this study. First, we assessed the degree of emotions related to compassion (i.e., "compassionate emotions") participants felt for the suffering target, employing a list of 5 items (e.g., "How much compassion do you feel for Luigi Schiavon?"; "How much do you feel emotionally touched by what happened to Luigi Schiavon?"; $\alpha = .92$). Answers were provided on a Likert scale going from 1 = *Not at all* to 7 = *A lot*). As a measure of helping intentions toward the suffering target, we employed two sliders, assessing how many hours participants were hypothetically willing to spend helping Luigi Schiavon. Responses ranged from 0 to 12 hours. After aggregating the scores of the two items ($\rho = .77$), we inspected the scale's distribution; Mardia's test showed a deviation from multivariate normality (multivariate *skewness* = 215.001, $p < .001$; multivariate kurtosis = 21.290, $p < .001$). We then employed a logarithmic transformation, to reduce this asymmetry. We also assessed participants' socio-demographic data (i.e., gender, age, job, education) and their levels of dispositional compassion, employing our Italian validated version (Lucarini et al., 2022) of the

Compassion Scale (CS; Pommier et al., 2020). As discussed in Chapter 1 and Chapter 2, the CS is a 16-item multidimensional measure, which both allows the assessment of the specific facets of compassion and of the overall construct. In this study, we were interested in assessing participants' general compassionate disposition, therefore all items were aggregated in a single factor, which was highly reliable ($\alpha = .81$).

4.3. Results

Analyses were performed on R (R Core Team, 2022). First of all, we ran a one-way ANOVA to test whether participants' perception of the target's behavior was consistent with the condition they were assigned to (Low Valuing vs. High Valuing vs. Control). In line with our expectations, results showed that participants differently evaluated the target's behavior in the three experimental conditions, providing further support on the effectiveness of our manipulations, $F(2, 224) = 329.6$; $p = <.001$, $\eta^2 = .75$. Post hoc comparison employing Tukey SD showed that participants assigned to the Low Valuing condition rated Luigi Schiavon's behavior as significantly more egoistic ($M_{Low\ Valuing} = 2.95$, $SD_{Low\ Valuing} = 1.53$) than participants assigned to the High Valuing ($M_{High\ Valuing} = 9.05$, $SD_{High\ Valuing} = 1.36$) and to the Control conditions ($M_{Control} = 4.28$, $SD_{Control} = 1.77$). Evaluations of the target's behavior significantly differ also between the Control and the High Valuing conditions, being higher in the latter. All these differences were significant at $p < .001$.

Then, to test our hypotheses, we run a regression model. In the model, the Experimental Conditions–which consist in two dummy variables representing the Low Valuing and the High Valuing conditions (Low Valuing = 1 vs. High Valuing = 0 vs. Control = 0; High Valuing = 1, Low Valuing = 0, Control = 0)–, dispositional compassion (centered), and the interactions between dispositional compassion and each of the dummy variables were the predictors, whereas compassionate emotions was the dependent variable (results are portrayed in Table 1). Results of the regression model were only partially in line with our hypotheses. In line with H1b, we found a positive main effect of the High Valuing condition: compared to the Control condition, participants

reported higher compassionate emotions when the target violated the decree with an altruistic purpose. Differently, we did not find a negative main effect of the Low Valuing condition (H1a): compared to the Control condition, participants who read the scenario in which the target commits an egoistic transgression did not report fewer compassionate emotions for him. In line with H2a, a positive main effect of dispositional compassion emerged: the more participants were dispositionally compassionate, the higher were their compassionate emotions toward the target, regardless of the experimental condition they were assigned to. As for interaction effects (H3), we found a significant interaction between the Low Valuing condition and dispositional compassion. Nevertheless, this effect was not in line with our prediction, being negative. Finally, and not in line with our hypothesis, we also found a negative interaction effect between the High Valuing condition and dispositional compassion. However, this effect did not meet the standard cut off criteria for significance results, being significant at $p = .076$.

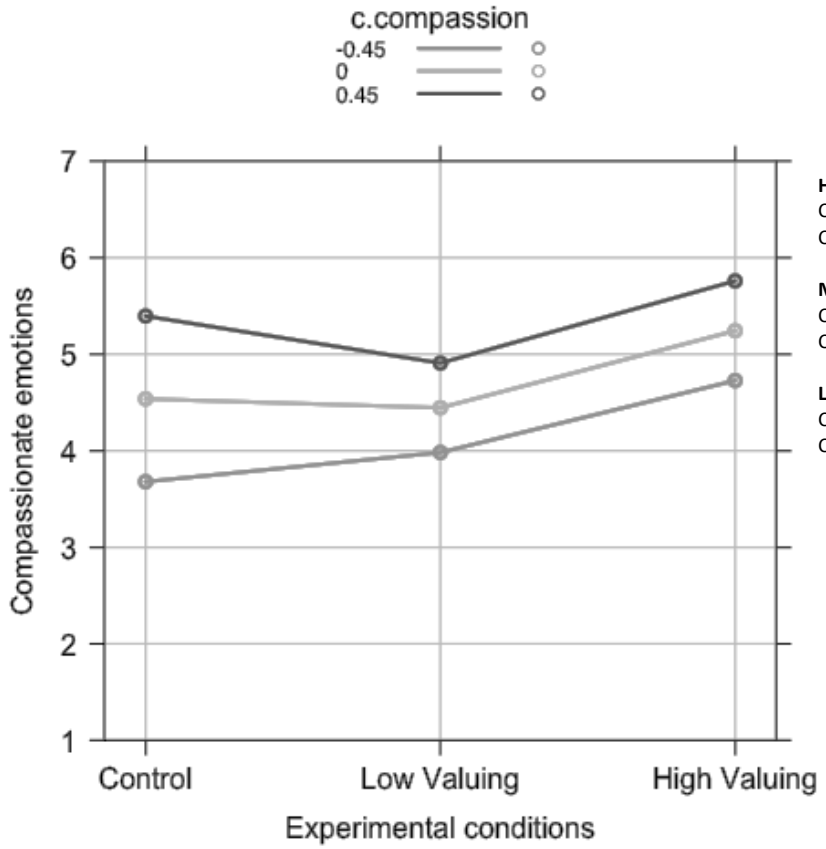
Table 1. Regression coefficient estimating compassionate emotions toward the target with Experimental Condition, dispositional compassion, and their interaction as predictors.

	Estimate	**St. Error**	**t value**	***p* value**
Intercept	4.54	.14	33.07	<.001***
Low Valuing	-.09	.19	-.49	.622
High Valuing	.71	.19	3.70	<.001***
Compassion	1.91	.29	6.56	<.001***
Low Valuing*Compassion	-.88	.41	-2.15	.033*
High Valuing*Compassion	-.76	.43	-1.78	.076

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Low Valuing is compared to the Control condition; High Valuing is compared to the control condition. $R^2 = .29$.

To better disentangle the interaction effects, we run a multiple simple slopes analysis. Specifically, we compared the slopes of the Low Valuing and the Control conditions, as well as the slopes of the High Valuing and the Control conditions, across the levels of dispositional compassion (-1SD, 0, +1SD), for a total of six slopes (results portrayed in Figure 1). The simple slope analysis showed that there was no significant difference in participants' self-reported level of compassionate emotions for the target between the High Valuing and the Control condition for participants scoring high (+1SD) in dispositional compassion. Instead, a significant difference emerged when participants scored medium or low (-1SD) in dispositional compassion: participants with medium and low levels of dispositional compassion reported higher compassionate emotions for the target when they were assigned to the High Valuing (vs. the Control) condition. As for the Low Valuing condition, we found the opposite pattern: participants who scored medium and low in dispositional compassion did not differ in the degree of compassionate emotions felt for the targets in the Low Valuing and the Control condition. Differently, and not in line with our hypothesis, we found a marginal significant difference (p = .073) between the Low Valuing and the Control conditions in participants high in dispositional compassion. Compared to those in the Control condition, participants who scored high in dispositional compassion and who were assigned to the Low Valuing condition, reported fewer compassionate emotions toward the target.

Figure 1. Plot of the regression model and simple slope analyses; Dependent variable: compassionate emotions.



High compassion (0.45):
Control vs. Low Valuing: b = -.48, *p* = .073
Control vs. High Valuing: b = .37, *p* = .160

Medium compassion (0):
Control vs. Low Valuing: b = -.09, *p* = .622
Control vs. High Valuing: b = .71, *p* < .001

Low compassion (-0.45):
Control vs. Low Valuing: b = .30, *p* = .237
Control vs. High Valuing: b = 1.04, *p* < .001

Then, we tested the same regression model, this time considering helping intention as the dependent variable. Again, results were partially in line with our hypothesis (Table 2). This time, no main effect of the Low Valuing condition nor of the High Valuing condition emerged (H1a and H1b). In line with H2b, and consistently with the previous regression model, we found a main effect of dispositional compassion: again, the higher was participants' level of dispositional compassion, the more time they were willing to help the suffering target, regardless of the experimental condition they were assigned to. Again, in line with the results of the previous regression model, we also found a significant negative interaction effect between the Low Valuing condition and dispositional compassion (H3).

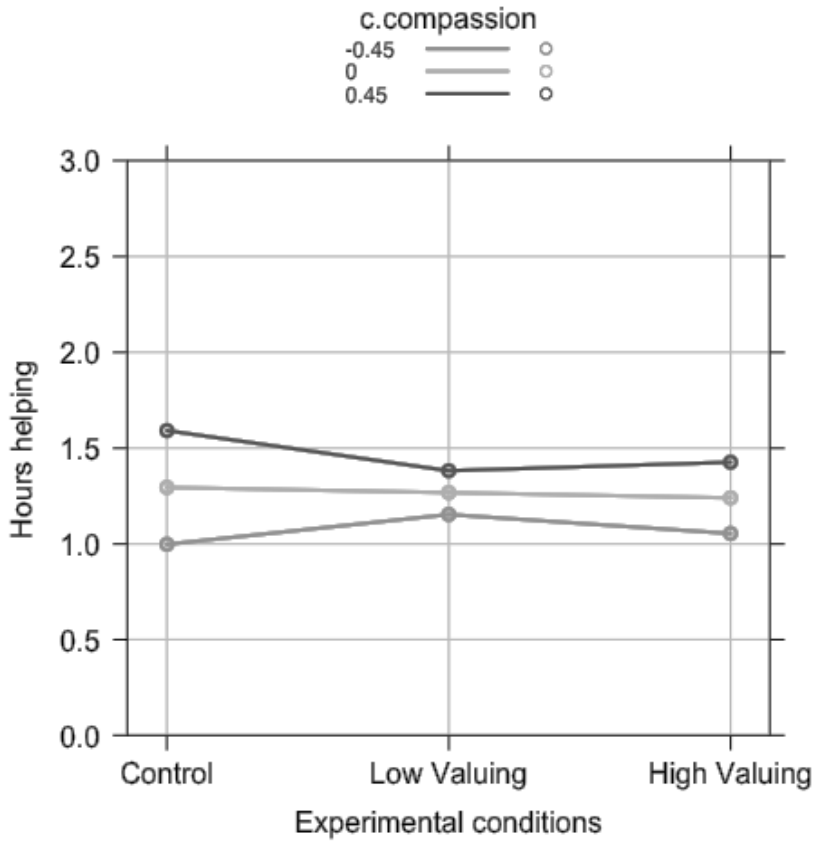
Table 2. Regression coefficient estimating helping intentions with Experimental Condition, dispositional compassion, and their interaction as predictors.

	Estimate	**St. Error**	**t value**	***p* value**
Intercept	1.29	.06	22.10	<.001***
Low Valuing	-.03	.08	-.34	.734
High Valuing	-.05	.08	-.67	.504
Compassion	0.66	.12	5.31	<.001***
Low Valuing*Compassion	-.41	.17	-2.32	.021*
High Valuing*Compassion	-.25	.18	-1.35	.178

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Low Valuing is compared to the Control condition; High Valuing is compared to the control condition. $R^2 = .14$.

Following the same rationale used for compassionate emotions, we run a multiple simple slopes analysis, assessing six slopes in total (Figure 2). No slope was significant. Only the slope comparing Low Valuing and Control conditions at high levels (+1SD) of dispositional compassion was instead marginally significant (p = .072). This effect was consistent with the pattern found for compassionate emotions: participants who scored high in dispositional compassion and who were assigned to the Low Valuing condition (vs, the Control condition) were less willing to (hypothetically) spend time helping the suffering target.

Figure 2. Plot of the regression model and simple slope analyses; Dependent variable: helping intentions.



High compassion (0.45):
Control vs. Low Valuing: b = -.21, *p* = .072
Control vs. High Valuing: b = -.16, *p* = .141

Medium compassion (0):
Control vs. Low Valuing: b= -.03, *p* = .734
Control vs. High Valuing: b = -.05, *p* = .504

Low compassion (-0.45):
Control vs. Low Valuing: b = .15, *p* = .156
Control vs. High Valuing: b = .06, *p* = .643

4.4. Discussion

The aim of this study was investigating people's reactions to others' suffering in the context of norms transgressions. Given that the study was designed in Spring 2020 –concurrently with the first SARS-CoV-2 outbreak– we focused on Covid-related norms transgressions, namely to violations of the lockdown imposed by the Italian government to contrast the pandemic. Specifically, we were interested in understanding whether portraying a transgressor as egoistic or altruistic (in contrast to giving no information about the reason behind his transgression) affected participants' reactions to his suffering, in terms of their self-reported compassion and helping intentions. Additionally, we were interested in exploring the role of having a compassionate attitude, with the idea that being dispositionally compassionate could buffer people's tendency to react less positively when a suffering target behaves negatively (e.g., Batson et al., 2007).

Results were partially in line with our initial hypotheses. As for main effects, and consistent with our hypothesis, we found a positive effect of the High Valuing condition (i.e., norm violation with altruistic purposes): compared to the control condition, when the target was violating the lockdown to help other people participants reported more compassionate emotions, but not higher helping intentions. Arguably, we did not find this effect for helping intentions because of the moment in which we run the study. Indeed, we asked participants to dedicate (even though only hypothetically) their time to a stranger right in a moment in which keeping distance from others was extremely salient. To overcome this limitation, future research should replicate this study in a non-Covid related context, also employing different measures of helping and prosocial intentions.

Importantly, even though the main effect of the High Valuing condition was not in line with Batson and colleagues' (2007) results –who found no difference in perceived empathy toward a positively portrayed and a neutral target– we argue that it is consistent with the structure of our experimental manipulations. As discussed above, data for this study were collected during the first wave of SARS-CoV-2, in Spring 2020. In that period, public attention was extremely concerned on preserving the health of elderly people, who were targeted as the category at higher risk of

developing dangerous symptoms if they got SARS-CoV-2. Therefore, it is likely that, more than focusing on the target's transgression, participants focused on his caring behavior and on his willingness to help a fragile category. This is also consistent with the fact that participants evaluated the transgressor in the High Valuing condition as extremely altruistic, as shown by the mean score in the High Valuing condition, which was significantly different from those in the other two conditions and way above the midpoint of the scale. Arguably, if the study was replicated in another experimental setting, without taking into account Covid-19, this positive main effect would not emerge. Future research may tackle this issue.

Differently, and contrary to our expectations, we did not find a negative main effect of the Low Valuing condition on the two dependent variables. Again, this result is not in line with Batson and colleagues' (2007) findings, and it might be explained in light of the characteristics of our experimental manipulations. In Batson et al. (2007), the control condition described the story of a target hit by a car because he was running late for classes: except for not paying enough attention to street signs, their "control" target did not commit any explicit transgression, whereas his "negative" counterpart was described as verbally abusive toward an old lady. In our manipulation instead, the target in the control condition still behaves negatively, explicitly violating a norm, but the reason behind his actions is not explained. Therefore, it is possible that, in absence of other contextual cues to evaluate him, participants still perceived the transgressive component of his behavior as more salient.

Finally, we found a significant main effect of dispositional compassion, which was in line with our hypothesis and corroborates a wide range of literature associating compassion to emotional resonance and helping behavior, both when compassion is treated as a stable disposition (e.g., Pommier et al., 2020; Gu et al., 2020) and when it is manipulated (e.g., Leiberg et al., 2011).

As for interaction effects, we found a negative interaction between dispositional compassion and the Low Valuing condition on each of the dependent variables. Simple slopes analyses showed that participants endorsing high levels of dispositional compassion reported fewer compassionate

emotions and helping intentions toward the target who commits an egoistic transgression (vs. the Control condition), whereas this effect did not hold for participants low and medium in dispositional compassion. Importantly, for both dependent variables the slope was only marginally significant. As for compassionate emotions, results of a power analysis ran on G*Power 3 (Faul et al., 2007) showed that our sample had 72% of statistical power to detect an effect size of $f = .30$ for the interaction effect between Low Valuing and dispositional compassion. Results of this power analysis support the idea that the study was underpowered, meaning that 28% of the time we would expect to find nonsignificant results, even when the null hypothesis was false. The issue of the lack power applies even more to helping intentions. This time the power analysis showed that our sample only had 18% of statistical power to detect an effect size of $f = .05$ for the interaction effect between Low Valuing and dispositional compassion. In this case we would find nonsignificant results –even when the null hypothesis was false– 82% of the time. Future studies should replicate these results, to see if these interaction effects hold, employing larger samples. Importantly, even though we predicted the interaction effects between the Low Valuing condition and dispositional compassion, we expected it in the opposite direction, hypothesizing that high dispositional compassion increased compassionate and prosocial reactions toward a negatively portrayed target. Interestingly, we found the opposite pattern when comparing the Control and the High Valuing conditions, but only for compassionate emotions: there was no significant difference for participants endorsing high levels of dispositional compassion, whereas the slopes were significant for participants low and medium in dispositional compassion.

These unexpected results might have occurred for several reasons and open up to interpretation. First of all, the nonsignificant difference between the Control and the High Valuing conditions among participants high in dispositional compassion might be due to the fact that in the Control condition participants did not receive any explicit information on which to base a value judgment on the target. Arguably, when highly compassionate participants do not have specific contextual cues to orient their judgement, they assume the best of the target, giving him the benefit

of the doubt. Differently, when highly compassionate participants are provided with negative information that can orient their judgement, their reactions –both in terms of compassionate emotions and helping intentions– to the suffering of the target decrease. This result is not in line with previous studies, which demonstrated the benefits of priming compassion in decreasing aggressive and punishing responses and in increasing emotional forgiveness toward transgressors and offenders (e.g., Condon & DeSteno, 2011; vanOyen Witvliet et al., 2015). However, compared to our research, those studies had a different design and methodology. First of all, they employed different dependent variables: none of these studies assessed neither compassion felt for the target, nor helping intentions toward him. Second, compassion was mostly manipulated, (either through inductions or training), whereas we focused on dispositional compassion that –being a stable individual disposition– might lead to different outcomes than those triggered by state-level inductions. Third, the above cited studies mostly focus on transgressions that do not harm other people. In our case instead, the behavior of the target in the Low Valuing condition could be highly impactful for the well-being of the entire community, especially in a tense moment in which public attention was highly concerned about protecting others. Harming or threatening other people's well-being then, could be a trigger for highly compassionate participants who –entailing a caring attitude toward others, based on kindness and concern for their well-being– might react harshly when a target puts other people at risk. Consistently, Condon and DeSteno (2017) argue that compassion might be a motivator to correct the negative actions of a transgressor, with the aim of reducing collective suffering. This interpretation might also find empirical support. For instance, McCall et al. (2014) found that expert meditators (vs. non-experts) who were victims of an unfair treatment punished less a transgressor who treated them unfairly in a dictator game. However, when other people were the victims of the unfair treatment, the meditators were more motivated to punish the transgressor, up to the point that no difference was found with the controls. The authors then argue that impacting a target who behaves unfairly toward others might be useful to discourage future transgressions and protect future victims. Despite this evidence might be in line with our arguments,

future studies should tackle this issue, to better understand whether compassionate people react negatively to norms that harm other people's well-being.

Importantly, the fact that we found the opposite patter for participants medium and low in dispositional compassion corroborate the idea that, compared to people endorsing lower levels of compassion, those who are highly compassionate interpret the target's situation through a different lens. Indeed, all participants attribute quite high compassionate emotions to the suffering target who commits an altruistic transgression, regardless of their self-reported levels of dispositional compassion. Nevertheless, only among people who are highly compassionate those reactions do not statistically differ from the High Valuing to the Control condition. Conversely, the reactions to the target's suffering are equally lower in the Control and the Low Valuing condition for medium and low compassionate participants. To summarize, in more ambiguous situation highly compassionate participants might assume the best in people, unless specific information is provided to shift their judgement. Arguably, if those negative information underline a behavior that put at risk the well-being of a community, highly compassionate participants react more negatively.

Few other limitations should be acknowledged in order to envisage key future directions. On the one hand, a potential limitation of this study –as of many of those assessing emotional and helping reactions– concerns social desirability: we used only self-report measures that might be biased. On the other hand, in our study, there is no cue to assume that the measures we employed are biased nor that highly compassionate people are more socially desirable. If so, social desirability should have elevated everyone's compassionate emotions and helping intentions toward the target, therefore social desirability cannot explain the interaction effects that we found. Additionally, dispositional compassion (assessed with the Compassion Scale) and social desirability were found not to be related in our previous study (Lucarini et al., 2022), as discussed in Chapter 2. Despite that, we acknowledge that future research should employ more sensitive measures that could better tackle our dependent variables, keeping to pay attention to social desirability biases.

A further limitation concerns the context in which we developed this study. As widely discussed above, data were collected during the first wave of SARS-CoV-2. Replicating the study in non-Covid settings would be crucial to disentangle the unexpected interaction effect that involves the Low Valuing condition and dispositional compassion, also to better understand whether highly compassionate participants generally react negatively to transgressions who harm other people's well-being (vs. other transgressions) or whether this effect was simply related to the saliency of the pandemic.

Chapter 5. "I do Care": Dispositional compassion in the context of Care and Fairness transgressions (Studies 3a & 3b)

5.1. Explaining previous results

As discussed in Chapter 4, Study 2 yielded unexpected results concerning the interaction between the Low Valuing condition and dispositional compassion, which were not consistent with previous literature (e.g., Condon & DeSteno, 2011; vanOyen Witvliet et al., 2015). Indeed, participants high in dispositional compassion reported fewer compassionate emotions toward a suffering target who committed an egoistic transgression (vs. a control condition where no information on the reasons behind the target's transgression was provided). In the discussion of Study 2, we suggested that this unexpected result might be imputable to the egoistic nature of the target's behavior. Indeed, in the Low Valuing condition participants were explicitly provided with information on which to base a –negative– value judgement on the target. However, we also argued that the reaction of highly compassionate participants also depended on the fact that his behavior could have been perceived as threatening collective well-being. In other words, we speculated that compassionate participants would react more negatively to the suffering of transgressors who, with their actions, put at risk other people's well-being at the collective level.

We already mentioned preliminary evidence in favor of this idea: McCall and colleagues (2014) showed that meditators –who are usually higher in compassion than controls– punished an offender more only when he harmed other people, but not themselves. Moreover, the fact that highly compassionate people are sensitive to collective suffering has also received theoretical support (Condon & DeSteno, 2017), and is consistent with previous evidence regarding the agreeableness personality trait, which is highly and positively related to dispositional compassion (e.g., Pommier et al., 2020). In multiple studies, Kammrath and Scholer (2011) found that people high (vs. low) in agreeableness judge perpetrators of communal transgressions (i.e., related to harming others) more unfavorably and are extremely sensitive to communal violations.

5.2. Under the lens of morality: Care and Fairness foundations

Importantly, in the context of norms transgression, a particularly relevant line of research concerns the Moral Foundation Theory (MFT; Haidt & Graham, 2007). The present theory stems from the idea that the co-evolution of innate psychological mechanisms, cultural intuitions, and practices led to the development of core moral intuitions or "foundations", an innate set of virtues that allows social agents to cultivate and maintain moral practices. Being a product of intuition, those foundations escape from rational awareness and are evolutionarily adaptive (Haidt & Joseph, 2004). Drawing from anthropology, psychology, and evolutionary theories on humans and sociality, Haidt and Joseph (2004) attempted to disentangle the nature of those foundations, looking for virtues and moral concerns that are widely shared across cultures. In their search, they identified five classes of moral foundations to which human beings are sensitive and react with approval or disapproval.

Among the five classes, the Care/Harm foundation (henceforth "Care") is particularly relevant for this thesis. The Care foundation stems from and is related to humans' visceral concern for others and entails a caring, nurturing, and protective attitude toward vulnerable individuals who need protection in order not to be harmed. In the context of norms violations, the Care foundation allows humans to experience third party concern: they do not simply react toward the individual that is directly harmed, they also respond to the offender, namely the person who is harming someone else (Haidt & Joseph, 2004). Considering that, as widely discussed, compassion entails a caring and concerning attitude toward others and their suffering, its link with the Care foundation is straightforward, up to the point that in taxonomies of moral emotions compassion is commonly addressed as the core emotion that characterize this foundation (Gray & Wegner, 2011). In light of this evidence, Care violations might be a particularly relevant context to investigate whether highly compassionate participants react negatively to transgressions harming others' well-being.

In the development of the MFT, another moral intuition that is often paired with the Care foundation is the Fairness/Reciprocity foundation (henceforth "Fairness"). Together, Care and Fairness are known as the *individualizing* foundations, given their emphasis on preserving rights and welfare for individuals (Graham et al., 2009). Specifically, this foundation is related to the idea of preserving justice, rights, and autonomy. Examples of Fairness violations are cheating, taking shortcuts, bribing, lying, and favoring someone for personal motives (e.g., Clifford et al., 2015). Importantly, despite Care and Fairness foundations both revolve around the idea of protecting people, they do it in different ways: one is related to preserving people's well-being (i.e., Care), the other is focused on people's rights (i.e., Fairness). The Fairness foundation, indeed, entails a different kind of concern, but not in the same way as Care violations do. Violations of Fairness can indeed imply a damage or a loss to other people, which do not explicitly relate to harming others and threatening their wellbeing. Given their link, but also their differences, comparing Care and Fairness transgression might help understanding whether highly compassionate participants are particularly sensitive to specific norm violations, related to harming the well-being of others.

Importantly, there is evidence that sensitivity to Care and Fairness moral issue is associated to different neural processing events. Starting from the distinction between ethics of justice and care –which should rely on different processes to drive decision making behaviors (Gillian, 1982)–, Robertson and colleagues (2007) demonstrated that moral issues related to either care or justice were associated to different physiological processes. The authors compared responses to care and justice moral issue, revealing that care issues activated brain areas related to emotion processing, whereas justice issues were more associated with cognitive and evaluative responses, such as the processing of categorical representations, as well as of behavioral intentions and actions.

5.3. Studies 3a & 3b

5.3.1. Aims, Hypotheses, and Studies overview

This set of studies stems from the willingness to clarify the unexpected results found in Study 2. First of all, we aimed at providing empirical support to the speculations advanced in Study

2, regarding highly compassionate participants and their sensitivity to norm violations harming others' well-being. We did that by comparing violations of and behaviors in line with Care and Fairness norms. Second, we aimed to address the limitations outlined in Study 2, namely replicating previous findings in a setting in which the Covid-19 pandemic was not salient, collecting a larger sample size, and employing more sensitive measures to tackle our dependent variables. In light of this background, and starting from previous empirical and theoretical evidence, we developed the following hypotheses.

First of all, we hypothesize that participants higher in dispositional compassion will report fewer compassionate reactions (H1a) and prosocial intentions (H1b) toward a suffering target violating (vs. behaving in line) a norm of Care, compared to participants endorsing lower levels of dispositional compassion. In the Fairness conditions, we hypothesize that the pattern of results would not differ for people high and low in dispositional compassion: participants will always show fewer compassionate reactions and prosocial intentions toward a target transgressing (vs. behaving in line with) the norm. We also expect to find main effects of the target's behavior –differently from Study 2– and of dispositional compassion –consistently with Study 2– on compassionate reactions (H2a) and prosocial intentions (H2b). Specifically, we expected a positive main effect of dispositional compassion, with participants higher in dispositional compassion showing generally higher levels on the dependent variables, and a negative effect of the Valuing factor, with participants showing lower levels on the dependent variables when the target behaved negatively (vs. positively). Finally, we expect that the interaction between dispositional compassion and target's behavior (positive vs. negative) on the dependent variables is mediated by different factors, which vary according to the salient moral norm. We hypothesize a mediating effect of emotional factors (i.e., emotions felt for the suffering target) when the Care norm is salient (H3a) and of evaluative factors (i.e., opinions toward the target) in the conditions when the Fairness norm is salient (H3b).

Importantly, Hypotheses 1a, 1b, 2a, and 2b were tested in an aggregated sample including participants of both Studies 3a and 3b. Indeed, Study 3b was the exact replication of Study 3a, with the only difference that we also assessed the variables to test Hypotheses 3a and 3b (i.e., emotions and opinions toward the target).

5.3.2. Method

The Psychological Research Ethics Committee of the University of Padova approved the procedures of this study, protocol #4211.

Participants. Due to resources constraints, we did not establish the sample size a priori. A total of nine research assistants administered the online questionnaire to an Italian convenience sample (Total N = 672) employing a snowball procedure. Specifically, five research assistant collected data of Study 3a (N = 281), whereas the remaining four administered Study 3b (N = 391). We established two exclusion criteria before data collection: participants (initial total N = 1088) were not considered in the analyses: (a) when they abandoned the survey without completing it or withdrew post-experimental informed consent (N = 354); (b) when they failed the manipulation check (N = 62). The characteristics of the samples of Studies 3a and 3b are described in Table 1,

Table 1. Characteristics of the samples of Studies 3a and 3b.

		Study 3a (N = 281)	Study 3b (N = 391)
Women (%)		60.5%	70.4%
Age (M, SD)		30.13 (13.81)	36.08 (16.61)
Employed		54.4%	52.9%
Education			
	Primary school	0.36%	0%
	Middle school	4.66%	8.25%
	High school	60.22%	59.02%
	Bachelor	20.79%	16.75%
	Master	11.47%	11.6%
	PhD	2.5%	4.38%

Procedure and measures. Procedure and materials were similar to those employed in Study 2. As for the previous study, we told participants that the research was aimed at investigating their attitudes toward people going through a difficult time. Participants were properly debriefed and informed of the real purposes of the study at the end of the questionnaire, with the possibility of withdrawing their consent to participation. Similar to Study 2, participants were presented with various versions of the story of a fictious target (Valerio Bertoldo), an Italian entrepreneur and owner a construction company, who was involved in a workplace accident. As for Study 2, the stories were all presented as if they were articles allegedly published in a local newspaper. Each article contained the information about the target's behavior and about the workplace accident. In the final section, each article also underlined that, after the accident, the target reported severe injuries and was in serious pain. As for Study 2, this last passage was crucial, in order to assess compassionate and prosocial reactions to the target's suffering.

The present study employed a 2 x 2 between participants research design. We manipulated the target's behavior –either negative and transgressive or positive and non-transgressive (i.e., Valuing Factor: Low vs. High Valuing)– and the salient moral norm (i.e., Moral Factor: Care vs. Fairness), respectively. Moral situations were designed starting from the content of standardized moral foundation vignettes (e.g., Clifford et al., 2015). The combination of the two factors resulted in the following four experimental conditions (see Appendix for Italian original versions).

Low Valuing x Care condition (N = 173): The target violated the norm of Care, threatening collective well-being with his actions. Specifically, he deprived the citizens of Manerbio (a small town in the North of Italy) of an important service: the target convinced the city council to close a social cooperative that was having financial troubles, even though it provided crucial help to the citizens. The target did it in order to obtain the contract to build a casino in its place.

High Valuing x Care condition (N = 165): The target behaved in line with the norm of Care, promoting collective well-being with his actions. Specifically, he preserved collective well-being by

helping the social cooperative that was having financial troubles: he offered the help of his construction company to renovate it for free, in order not to make it close.

Low Valuing x Fairness condition (N = 175): The target violated the norm of Fairness, acting unfairly. Specifically, the police discovered that the target has bribed the city council of Maberbio, in order to assure that his company could get the contract to build a large parking spot. Importantly, in both Fairness conditions, the social cooperative and the casino were not mentioned, as we opted for a neutral construction, the parking spot, which did not entail an explicit benefit nor a loss for the community.

High Valuing x Fairness condition (N = 159): The target behaved in line with the norm of Fairness, acting fairly. Specifically, the story stressed on the positive qualities of the target as an entrepreneur, who was described as a model of legality in the construction field. The article also mentioned that in the past the target reported attempts of bribery to the police.

After reading the experimental conditions they were assigned to, participants were presented with a manipulation check question, in order to assess whether they paid attention to the content of the article they just read. The manipulation check item –as well as correct answers– varied according to the experimental condition participants were assigned to, with multiple-choices responses. In the Low and High Valuing Care conditions, participants were asked to recall what was the project the target's company was working on, whereas in the Low and High Valuing Fairness conditions we asked participants to recall what happened to the target after the accident.

Subsequently, participants completed measures assessing our dependent variables. As previously mentioned, one of the limitations of Study 2 regarded the measures employed, which did not fully tackle compassionate and prosocial responses toward the target. In Study 2, we assessed compassionate emotions experienced for the target, namely a list of items assessing the emotional side of compassion (i.e., "How much do you feel emotionally touched by what happened to Luigi Schiavon?"), but unable to capture other aspects of the construct, such as its active component or the ability to tolerate others' suffering. For this reason, we decided to develop a new list of items

which could better tackle overall compassionate reactions for the target. We were inspired by scales assessing dispositional compassion, in particular by the Compassion Scale (Pommier et al., 2020), and we developed six items assessing compassionate reactions toward the target (e.g., "I would like to be there for him at this difficult time"; "I can't really connect with his suffering" – reverse coded). Answers were provided on a Likert scale going from 1 = *Not at all* to 7 = *A lot* (α = .74).

Similarly, we replaced the measure of helping intentions employed in Study 2 –i.e., two sliders assessing the number of hours participants were hypothetically willing to spend helping the target– with a 4-item measure (Voci & Pagotto, 2009) that captures a more general intention to act prosocially toward the target (i.e., "I would spend time helping him or thinking how to help him"; response scale: 1 = *Absolutely not*, 7 = *Absolutely yes*; α = .74).

As previously mentioned, in Study 3b (N = 391) we also administered a subset of measures assessing the hypothesized mediators, namely opinions of the target and positive and negative emotions felt when thinking about his behavior. We employed a list of five sliders (Response scale 0-100) to assess opinions: participants rated various aspects of the target's behavior (i.e., Negative-Positive; Immoral-Moral; Harmful-Beneficial; Threatening-Non-threatening) and gave a general evaluation of him as a person (Negative-Positive). Items were aggregated; reliability was high in the general sample (α = .75). We also computed Cronbach's alpha in Care (N = 192, α = .88) and Fairness (N = 199, α = .89) subsamples, given that mediated moderations were tested in these subsamples. Then, participants had to think about the target's behavior and rate the degree in which they felt each of five positive and negative emotions on a Likert-type scale going from 1 = *Not at all*, to 7 = *A lot*. We aggregated positive (i.e., Gratitude, Admiration) and negative (i.e., Contempt, Anger, Disgust) emotions, which were highly reliable in the general sample ($\rho_{\text{positive emotions}}$ =.86; $\alpha_{\text{negative emotions}}$ = .80), as well as in Care ($\rho_{\text{positive emotions}}$ =.89; $\alpha_{\text{negative emotions}}$ = .83) and Fairness ($\rho_{\text{positive emotions}}$ =.79; $\alpha_{\text{negative emotions}}$ = .83) subsamples.

Finally, participants completed the Compassion Scale (CS; Pommier et al., 2020; Italian version: Lucarini et al., 2022) which was described in detail in the previous chapters. Consistently

with Study 2, the 16 items were aggregated to obtain an overall measure of dispositional compassion (α = .83). After completing the CS, participants were presented with post-experimental informed consent and could confirm or withdrew their participation to the experiment.

5.3.3. Results

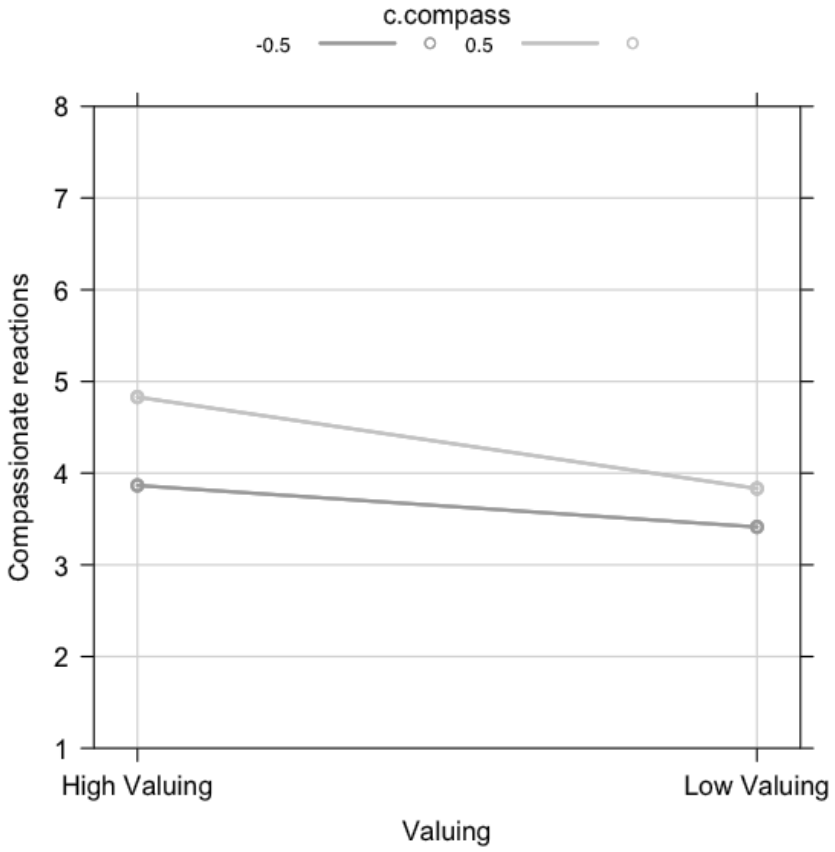
Linear models on the aggregated sample. All analyses were performed on the software R (R Core Team, 2022). We tested our first set of hypotheses (H1a, H1b, H2a, H2b) in the aggregated sample, including data from both Studies 3a and 3b (N = 672). First of all, we ran a regression model where the Valuing factor (Low vs. High), the Moral factor (Care vs. Fairness), dispositional compassion (centered) and their interaction were the predictors of compassionate reactions toward the suffering target. Results (Table 2) did not meet H1a: there was no significant interaction effect between Valuing and Moral factors and dispositional compassion but, consistently with results of Study 2, we found a significant negative interaction between Valuing and dispositional compassion (portrayed in Figure 1). A multiple simple slopes analysis in which we compared the slopes of Low and High Valuing for high (+1SD) and low (-1SD) levels of dispositional compassion, revealed that both participants high and low in dispositional compassion reported fewer reactions when the target transgressed a moral norm, compared to when he behaved in line with the norm. However, the differences in compassionate reactions between the High and Low Valuing conditions were more pronounced when participants were highly compassionate at the dispositional level, as shown by the inclination of the slope (see Figure 1 for the portrayal of the two-way interaction and simple slopes analyses). As for H2a, it was confirmed: there was a positive main effect of dispositional compassion on the dependent variable, meaning that participants who are highly compassionate generally report more compassionate reactions for the target, and a negative main effect of Valuing, so that participants experienced fewer compassionate reactions for the target when he transgressed (vs. behaved in line with) a moral norm

Table 2. Regression coefficient estimating compassionate reactions toward the target with the Valuing factor, the Moral factor, dispositional compassion, and their interaction as predictors.

	Estimate	**St. Error**	**t value**	***p* value**
Intercept	4.28	.08	53.19	<.001***
Valuing factor	-.55	.11	-4.95	<.001***
Moral factor	.13	.11	1.19	.236
Compassion	.97	.16	5.88	<.001***
Valuing*Moral	-.35	.16	-2.21	.027*
Valuing*Compassion	-.48	.23	-2.03	.043*
Moral*Compassion	-.04	.23	-.17	.869
Valuing*Moral*Compassion	-.12	.33	-.36	.722

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Valuing factor is 0 = High Valuing, 1 = Low Valuing; Moral factor is 0 = Care, 1 = Fairness. $R^2 = .20$.

Figure 1. Plot of the two-way interaction between Valuing and dispositional compassion; Dependent variable: compassionate reactions.



High compassion (0.49):
High vs. Low Valuing: b = -.99, $p < .001$

Low compassion (-0.49):
High vs. Low Valuing: b = -.45, $p < .001$

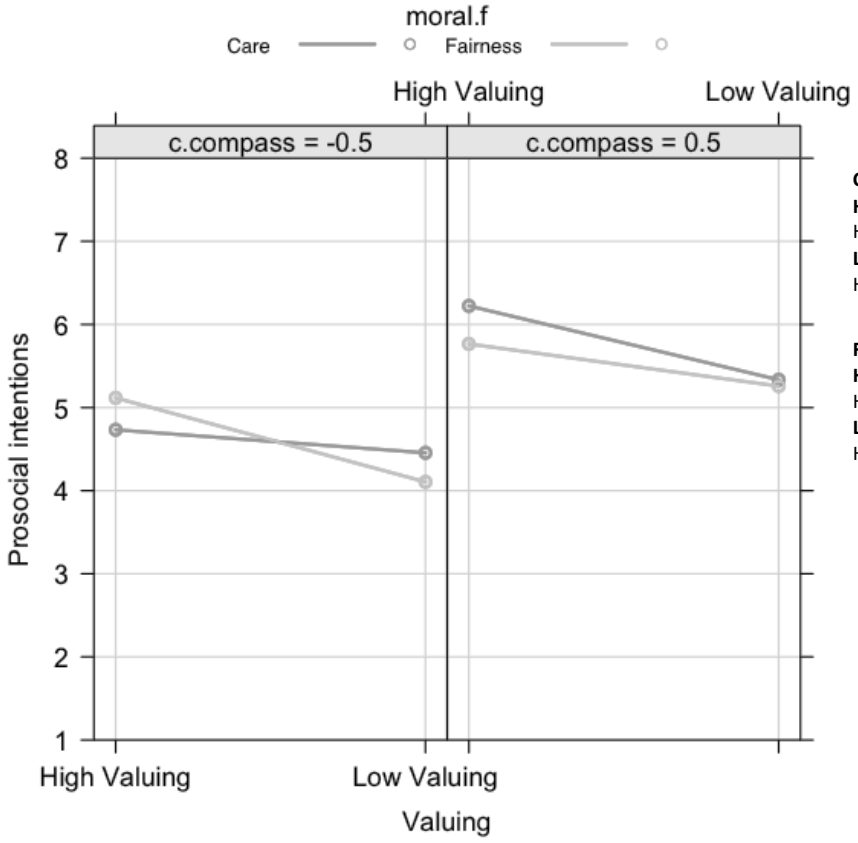
We tested the same regression model, considering prosocial intentions as the dependent variable. This time, results were in line with our predictions (Table 3): there was a significant three-way interaction between the Valuing factor, the Moral factor, and dispositional compassion. To better disentangle this result, we run a multiple simple slope analysis, comparing the slopes of Low Valuing and High Valuing in Care and Fairness conditions, across the levels of dispositional compassion (-1SD, +1SD), for a total of four slopes (results portrayed in Figure 2). Results were in line with H1b: when the target violated (vs. behaved in line with) a norm of Care, highly compassionate participants reported fewer prosocial intentions toward the target, compared to participants lower in dispositional compassion, whose scores did not significantly differ in the High and Low Valuing conditions. In the Fairness conditions, as predicted, the pattern of results for people high and low in dispositional compassion was the same: participants always reported fewer prosocial intentions toward the target when he transgressed (vs. behaved in line with) the norm. Consistently with findings on compassionate reactions, H2b was also confirmed: the model yielded significant main effects of dispositional compassion and of Valuing on prosocial intentions. As expected, prosocial intentions toward the suffering target are positively predicted by participants' level of dispositional compassion and negatively predicted by the target's negative and transgressive behavior (vs. positive and in line with a moral norm).

Table 3. Regression coefficient estimating prosocial intentions toward the target with the Valuing factor, the Moral factor, dispositional compassion, and their interaction as predictors.

	Estimate	**St. Error**	**t value**	***p* value**
Intercept	5.48	.08	68.33	<.001***
Low Valuing	-.58	.11	-5.25	<.001***
Fairness	-.04	.11	-.32	.746
Compassion	1.49	.16	9.07	<.001***
Low Valuing*Fairness	-.18	.16	-1.12	.026
Low Valuing*Compassion	-.61	.23	-2.62	.009**
Fairness*Compassion	-.84	.23	-3.71	<.001***
Low Valuing*Fairness*Compassion	1.11	.32	-3.45	<.001***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Valuing factor is 0 = High Valuing, 1 = Low Valuing; Moral factor is 0 = Care, 1 = Fairness. $R^2 = .27$.

Figure 2. Plot of the regression model and simple slope analyses; Dependent variable: prosocial intentions.



Care conditions:
High compassion (0.49):
High vs. Low Valuing: b = -.88, $p < .001$
Low compassion (-0.49):
High vs. Low Valuing: b = -.27, $p = .065$

Fairness conditions:
High compassion (0.49):
High vs. Low Valuing: b = -.51, $p < .001$
Low compassion (-0.49):
High vs. Low Valuing: b = -1.00, $p < .001$

Mediated moderations on Care and Fairness subsamples. As previously mentioned, we tested Hypotheses 3a and 3b employing the data of Study 3b (N = 391), in which we administered measures assessing participants' opinions toward the target, as well as positive and negative emotions felt when thinking about his behavior. To test these hypotheses, we split the sample in two parts, in order to obtain two subsamples including participants respectively assigned to Care (N = 192) and Fairness (N = 199) conditions. In these subsamples, we tested mediated moderation models, following the guidelines of Muller et al. (2005). In both Care and Fairness subsamples, we tested the simultaneous presence of the interaction between Valuing (i.e., the predictor) and dispositional compassion (i.e., the moderator) and the mediation of opinions toward the target, as well as of positive and negative emotions, on the dependent variables (i.e., compassionate reactions and prosocial intentions).

Following, Muller et al. (2005), to test mediated moderation, we estimated three classes of models:

a) Model 1 tested the effects of the predictor (X), the moderator (MO) and the interaction between X and MO on the dependent variable (Y). Such an interaction should be significant, to ensure a general moderation effect;

b) Model 2 tested the effects of X, MO and the interaction between X and MO, on the mediator (ME);

c) Model 3 tested the effects of X, ME and the interactions between X and MO on Y.

As a result, if a mediated moderation occurs, in Model 3 the interaction between X and MO should be either reduced in magnitude or become nonsignificant (i.e., "full" mediated moderation), compared to the moderation emerged in Model 1. Importantly, to support mediated moderation, the interaction tested in Model 1 should always be significant, as well as the interaction between X and MO on ME in Model 2. In Model 3, the residual effect of ME on Y should be significant.

In the Care subsample, results (portrayed in Table 4) showed that mediated moderation did not occur. In Model 1 no significant interaction of Valuing and dispositional compassion emerged

on compassionate reactions, while such an interaction was present for prosocial intentions. The model yielded significant main effects of Valuing (with lower compassionate reactions and lower prosocial intentions in the Low Valuing condition) and positive effects of dispositional compassion.

In Model 2, there was no significant interaction effect between Valuing and dispositional compassion on any of the hypothesized mediators. When positive emotions were the dependent variable, we found a negative main effect of Valuing (with lower scores for the Low Valuing condition) and a positive main effect of dispositional compassion on positive emotions. In the models where negative emotions and opinions were considered as dependent variables, we only found main effects of Valuing (Low Valuing was associated with more negative emotions and worse opinions).

As for Model 3, when compassionate reactions was the dependent variable, no significant interaction between Valuing and dispositional compassion emerged, the main effect of Valuing became nonsignificant, the main effect of dispositional compassion was significant, but reduced, and there was a significant main effect of positive emotions. Importantly, despite these results do not support mediated moderation, they show that the effect of the Valuing factor on compassionate reactions is fully mediated by positive emotions: the Low Valuing condition was associated with lower positive emotions, which in turn were related to lower compassionate reactions.

As for prosocial intentions, in Model 3 we found a significant interaction between Valuing and dispositional compassion, a main effect of dispositional compassion, and a main effect of negative emotions, whereas the main effect of Valuing became nonsignificant (compared to Model 1). Again, this pattern of results supports a full mediation, with the effect of the Valuing factor on prosocial intentions entirely explained by negative emotions: the Low Valuing condition was associated with higher negative emotions, which in turn were related to lower prosocial intentions.

We tested the same models in the Fairness subsample (Table 5). Again, results did not support mediated moderation. Model 1 yielded main effects of Valuing and of dispositional compassion on both compassionate reactions and prosocial intentions. Moreover, an interaction

between Valuing and Compassion was significant when compassionate reactions was the dependent variable.

In Model 2, there was always a main effect of Valuing on each of the mediators, and an interaction between Valuing and dispositional compassion when negative emotions and opinions were the dependent variables.

Finally, in Model 3 there was no interaction between Valuing and dispositional compassion, a reduced but significant main effect of Valuing, and a main effect of dispositional compassion on compassionate reactions, meaning that the effect of Valuing on this dependent variable is partially mediated by positive emotions. Results concerning prosocial intentions supported a full mediation of target's opinions: the effect of Valuing became nonsignificant, whereas there was a significant main effect of opinions toward the target (as well as one of dispositional compassion). Thus, the Low Valuing condition was associated with less positive opinions, which in turn were related to lower prosocial intentions.

Table 4. Mediated moderation models in the Care subsample

	Dependent variable	Predictors	Estimate	St. Error	t value	*p* value
Model 1	Compassionate reactions	Intercept	4.43	.12	37.56	<.001***
		Valuing	-.71	.16	-4.36	<.001***
		Compassion	.92	.24	3.84	<.001***
		Valuing*Compassion	-.42	.34	-1.25	.211
Model 1	Prosocial intentions	Intercept	5.38	.10	53.68	<.001***
		Valuing	-.48	.14	-3.44	<.001***
		Compassion	1.47	.20	7.27	<.001***
		Valuing*Compassion	-.68	.29	-2.37	.019*
Model 2	Positive emotions	Intercept	4.67	.14	32.10	<.001***
		Valuing	-3.03	.20	-15.02	<.001***
		Compassion	1.06	.29	3.60	<.001***
		Valuing*Compassion	-.62	.41	-1.50	.136
Model 2	Negative emotions	Intercept	1.55	.14	10.92	<.001***
		Valuing	.85	.20	4.32	<.001***
		Compassion	-.18	.29	-.61	.543
		Valuing*Compassion	.47	.40	1.16	.246
Model 2	Opinions	Intercept	76.74	2.30	33.37	<.001***
		Valuing	-27.73	3.20	-8.68	<.001***
		Compassion	1.99	4.82	.41	.68
		Valuing*Compassion	1.81	6.68	.27	.79
Model 3	Compassionate reactions	Intercept	2.91	.43	6.80	<.001***
		Valuing	.09	.24	.39	.697
		Compassion	.65	.25	2.62	.009**
		Positive emotions	.22	.06	3.40	<.001***
		Negative emotions	.02	.07	.26	.799
		Opinions	.02	.004	1.34	.182
		Valuing*Compassion	-.26	.34	-.78	.434
Model 3	Prosocial intentions	Intercept	5.25	.36	14.55	<.001***
		Valuing	-.12	.21	-.59	.559
		Compassion	1.37	.21	6.57	<.001***
		Positive emotions	.05	.05	.94	.349
		Negative emotions	-.20	.06	-3.44	<.001***
		Opinions	.002	.004	.73	.464
		Valuing*Compassion	-.59	.28	-2.06	.041*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Valuing factor is 0 = High Valuing, 1 = Low Valuing.

Table 5. Mediated moderation models in the Fairness subsample

	Dependent variables	Predictors	Estimate	St. Error	t value	*p* value
Model 1	Compassionate reactions	Intercept	4.63	.10	46.50	<.001***
		Valuing	-1.21	.14	-8.71	<.001***
		Compassion	1.02	.18	5.63	<.001***
		Valuing*Compassion	-.66	.27	-2.43	.016*
Model 1	Prosocial intentions	Intercept	5.51	.11	51.24	<.001***
		Valuing	-.77	.15	-5.16	<.001***
		Compassion	.63	.20	3.20	.002**
		Valuing*Compassion	.32	.29	1.10	.271
Model 2	Positive emotions	Intercept	3.28	.14	24.06	<.001***
		Valuing	-1.88	.19	-9.93	<.001***
		Compassion	-.03	.25	-.11	.909
		Valuing*Compassion	.03	.37	.07	.945
Model 2	Negative emotions	Intercept	1.59	.13	11.84	<.001***
		Valuing	1.33	.19	7.11	<.001***
		Compassion	-.45	.24	-1.86	.065
		Valuing*Compassion	.82	.37	2.23	.027*
Model 2	Opinions	Intercept	69.90	1.97	35.57	<.001***
		Valuing	-34.18	2.76	-12.43	<.001***
		Compassion	5.06	3.66	1.39	.167
		Valuing*Compassion	-11.51	5.39	-2.14	.034*
Model 3	Compassionate reactions	Intercept	3.64	.33	11.07	<.001***
		Valuing	-.50	.20	-2.56	.011*
		Compassion	.92	.18	5.01	<.001***
		Positive emotions	.17	.06	2.93	.004**
		Negative emotions	-.07	.07	-1.17	.244
		Opinions	.01	.004	1.64	.102
		Valuing*Compassion	-.46	.27	-1.69	.092
Model 3	Prosocial intentions	Intercept	4.78	.36	13.16	<.001***
		Valuing	-.31	.22	-1.40	.163
		Compassion	.51	.20	2.52	.012*
		Positive emotions	-.001	.06	-.03	.979
		Negative emotions	-.06	.06	-.92	.360
		Opinions	.01	.004	2.52	.013*
		Valuing*Compassion	.53	.30	1.79	.075

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Valuing factor is 0 = High Valuing, 1 = Low Valuing.

5.3.4 Discussion

The aim of this set of studies was clarifying and expanding the unexpected pattern of results found in Study 2, by providing empirical support to the idea that people who endorse high levels of dispositional compassion react harshly to norm violations, and especially to those harming other people's wellbeing. Moreover, we aimed at addressing some limitations highlighted in Study 2, such as the non-generalizability of the study context (given the saliency of Covid-19), as well as some methodological issues related to the measures employed and the modest sample size. To address these issues, we collected a larger sample of participants and presented them with scenarios where there was no reference to the pandemic, and employed different measures assessing our dependent variables. Specifically, we ran two data collections, Study 3a (N = 281) and Study 3b (N = 391). The two studies had the same design; thus, data were aggregated to test our main hypotheses in a larger sample. The only difference concerned a subset of cognitive and emotional measures administered in Study 3b that we hypothesized could, at least partially, explain the interaction between dispositional compassion and target's behavior (positive vs. negative) on the dependent variables, in the context of different norm violations.

Results were only partially in line with our hypotheses. First of all, the hypothesis that highly compassionate individuals would report fewer compassionate reactions (H1a) and prosocial intentions (H1b) toward the suffering target who commits a Care violation (vs. a behavior in line with such norm) was not confirmed for compassionate reactions. As discussed in the results section, we did not find a significant three-way interaction between the Valuing factor, the Moral factor, and dispositional compassion, only a significant two-way interaction between the Valuing factor and dispositional compassion. Simple slope analyses revealed that participants who are both high and low in dispositional compassion showed fewer compassionate reactions toward the negative target, and this effect was stronger for highly compassionate participants, as shown by the inclination of the slope. Importantly, this result is coherent with our findings of Study 2, where we found that highly compassionate participants who were exposed to the story of a suffering target committing

an egoistic transgression (vs. the control condition) reported fewer compassionate emotions toward him and wanted to spend fewer hours helping him. Differently, when prosocial intentions were the dependent variable, results were in line with our hypothesis: there was a significant three-way interaction between the Valuing factor, the Moral factor, and dispositional compassion. Importantly, simple slope analysis provided further support to our prediction: when the target violated (vs. behaved in line with) a norm of Care, highly compassionate participants reported fewer prosocial intentions toward him, whereas this difference did not occur for participants low in dispositional compassion. Moreover, as expected, in the Fairness condition the pattern of results for people high and low in dispositional compassion was the same: participants always reported fewer prosocial intentions toward the transgressive target, compared to the target who behaves in line with a Fairness norm.

Overall, our results support the idea that highly compassionate participants show fewer compassionate and prosocial reactions toward negative targets who behave negatively and transgressively. Importantly, for prosocial intentions, this result occurs specifically when the transgression entails an explicit harm to people's well-being at the collective level. On the one hand, these results are consistent with the goal congruence account, a theory according to which people's judgements are oriented by the degree in which they perceive a certain event as congruent or incongruent to their goal and values (Lewin, 1935). Compassionate people –who entail a caring and concerning attitude toward others and experience a natural sensitivity to their well-being (Lucarini et al., 2022)– might be more likely to react poorly to the suffering of individuals committing harmful transgressions because their hold strong communal goal and values related to taking care of others. On the other hand, the fact that our predictions concerning the interaction effects were only partially confirmed can be explained in light of the Theory of Dyadic Morality (TDM, Schein & Gray, 2018), a recent theoretical account that proposes a new understanding of morality and a redefinition of its content and mechanisms. According to this theory, immoral acts can all be perceived as aligned on a continuum of harm, which orients moral judgements. Therefore,

all norm violations should entail perceptions of harm, differently from what argued in the Moral Foundation Theory, according to which people endorse a set of innately cognitive modules that are related to distinct moral domains. Importantly, evidence in favor of this account and on the widespread role of harm across morality is supported by empirical data showing that dimensions of the Moral Foundation Questionnaire (MFQ) lack of distinctiveness, being highly correlated with each other (e.g., .72 between Fairness and Care; Graham et al., 2011). Therefore, interpreting our result under the lens of TDM might suggest that – at least in some cases – participants did not react differently to Care and Fairness transgressions, perceiving both as harmful for others. Possibly, future studies should empirically test whether this is true, by explicitly assessing the degree in which different violations are perceived as harmful.

As for Hypotheses 2a and 2b, in line with our expectations, we found a positive main effect of dispositional compassion on the dependent variables. Beyond being consistent with previous literature associating dispositional compassion with positive other-oriented emotional and prosocial responses in the face of suffering (e.g., Gu et al., 2020; Pommier et al., 2020), this result also replicated findings of Study 2. Moreover, results also supported the hypothesized main effect of Valuing. Differently, in Study 2 we did not find this effect, arguably because our previous manipulations always involved a target committing a transgression, even though for different reasons (i.e., egoistic vs. altruistic vs. control). Instead, given that in Studies 3a and 3b we compared transgressive and non-transgressive targets, it is reasonable that this effect is significant, being also in line with previous literature concerning reactions to the suffering of negative targets (i.e., Batson et al., 2007).

Finally, H3a and H3b were disconfirmed. However, although data did not support the hypothesized mediated moderation models, we found evidence for mediations between the Valuing factor and the dependent variables in both Care and Fairness subsamples. Importantly, we found that the effect of the Valuing factor on compassionate reactions was mediated by positive emotions: this mediation was full in the Care subsample, and partial in the Fairness subsample. These results

provide important insights: the fact that the effect of the target's behavior on compassionate reactions is conveyed by the emotions that people feel in relation to his behavior provides evidence that positive emotional activation stands as a core mechanism in compassionate responding. This is consistent with the Buddhist idea that feeling compassion toward loved ones is easier, because we are able to experience positive feelings and emotions toward them (Dalai Lama, 2006). As for prosocial intentions, results were different in Care and Fairness subsamples. In the Care subsample, negative emotions fully explained the effect of the Valuing factor on prosocial intentions, whereas in the Fairness subsample there was a full mediation of opinions toward the target. Importantly, these results suggest that prosocial and compassionate responding involve different processes. On the one hand compassionate reactions to the suffering of someone seem to mainly depend on positive emotions. On the other, prosocial intentions are predicted by separate processes, which vary according to the salient moral norm: emotional, when the norm of Care is salient, and evaluative, when the context entails a norm of Fairness. This last result is consistent with Robertson and colleagues' (2007) findings, who found that Care and Fairness violations entails different psychological processes by activating brain areas, respectively involved in emotional processing for care issues, and in evaluative responses for justice issues. Future studies should deepen the investigation on the role of these underlying mechanisms in the context of norms transgressions, and in relation to different emotional and prosocial outcomes.

Importantly, beyond supporting the mediating role of emotional and evaluative factors in the relationship between targets' behavior and the dependent variables, in the regression models performed in Care and Fairness subsamples, we also replicated the main effects of Valuing and of dispositional compassion, providing further evidence that target's behavior (positive vs. negative) orients compassionate and prosocial responding, and to the fact that dispositional compassion works as a protective factor in fostering positive reactions to the suffering of other people.

We must acknowledge the fact that these studies have some limitations. A first limitation concerns the generalizability of our findings. For instance, past research highlighted that there are

cross-cultural differences in the perception of moral issues between individualistic and collectivistic cultures, with people coming from collectivistic cultures being more punitive toward targets committing communal violations (Laham et al., 2010). Therefore, our results might not be generalizable to other cultural context (Simons et al., 2017). Second, despite our findings are mainly consistent with results of Study 2, Study 3a and 3b are conceptual replications: we employed different measures to tackle our dependent variables and we changed the studies' design. Third, despite the fact that, as discussed in Study 2, it is unlikely that the self-report measures administered are biased due to social desirability, we must acknowledge that a behavioral assessment of the variables addressed in these studies is still lacking. Even though recent research has demonstrated the predictive role of numerical measures in assessing human feelings (Kaiser et al., 2022), future studies should possibly employ behavioral tasks, especially to assess prosocial responses (e.g., choice to donate money or sign a petition).

Concluding, Studies 2, 3a, and 3b provide important insights on the role of dispositional compassion in shaping people's reactions to the suffering of others, in the context of norms transgressions. Results of these studies showed that, contrary to our expectations, there is a sort of downside effect of being highly compassionate at the dispositional level that leads people to experience fewer emotional and prosocial reactions toward negative targets acting transgressively. Moreover, our studies attempt to investigate upon the motives leading to such poorer reactions.

Importantly, current results solely concern dispositional compassion but, as discussed in Chapter 1, compassion can be both experienced as a trait-like individual disposition and as a state that can be induced or primed. Therefore, it would be crucial to investigate whether priming compassion leads to different outcomes than those found when considering compassion as a disposition. In particular, priming compassion via trainings which take into account elements of Buddhism might lead to the desired outcomes, namely increased emotional and prosocial reactions toward suffering targets, even when they behave negatively. This might happen because compassion trainings based on Buddhist practices allow to gain deeper awareness on core concepts,

such as the universality of pain in human experiences, as well as having a non-judgmental and tolerant attitude toward others, even if they are in some sense disagreeable to us. The following studies of this thesis attempt to test whether this is true.

Chapter 6. Training compassion

6.1. Across the literature on compassion trainings: differences in length and accessibility

As discussed in Chapter 1, the attempts to study compassion adopting a scientific approach date back to recent years, and while some researchers were struggling to develop a proper definition of the construct and to find ways to assess it as a stable disposition, others progressively became interested in developing paradigms to foster it at the state-level. In particular, a prolific line of research developed around the possibility to *train* compassion, often drawing on contemplative traditions and meditation practices. Western researchers in different areas of psychology developed a series of interventions to increase compassion toward others and the self that, through the years, gained solid empirical support, and were employed in different contexts, even in the therapeutic field (for a review see Quaglia et al., 2021). We can refer to these interventions as "compassion trainings". Those interventions are meditation-based exercises which incorporate Buddhist precincts and practices.

Despite their shared similarities, compassion trainings can usually differ in some primary dimensions, such as their length and intensity. For instance, some studies employed intensive and long-term training programs, which developed under the course of a year, combining multiple days retreats, daily at home meditation modules, and weekly meditation groups (e.g., Lumma et al., 2016). On the one hand, the advantage of this approach is that the intensity and the length of these programs allow participants to deeply assimilate their contents, thus those interventions are more likely to yield significant effects. The downsize, on the other hand, concerns their poor accessibility: given that these interventions require a large investment of resources, both in terms of time and commitment, many people might not be able to fully engage in those programs and thus to experience their beneficial effects.

As an alternative to such intensive design, researchers attempted to develop and employ shorter training protocols. The length of these interventions is highly variable. Non-intensive

protocols develop over multiple weeks, usually between three and nine, and can include various activities, from daily individual practices (usually one hour per day, via audio-guided meditations), up to weekly mediation classes with an instructor. Among the most prominent examples of standardized training programs there are the Cognitively-Based Compassion Training (CBCT; Jazaieri et al., 2013) and the Compassion Cultivation Training (CCT; Pace et al., 2009), whose effectiveness has been largely proven in randomized control trials (for a review, see Kirby et al., 2017).

Finally, a growing number of researchers is also exploring the possibility to develop short compassion trainings. Given their short length, those interventions can be easily administered over the course of one day, and usually last from a few hours to a few minutes (around ten or less). The effectiveness of those short trainings has already been proven in relation to different outcomes, leading to increased social connectedness (Hutcherson et al., 2008), prosociality (Leiberg et al., 2011), and positive attitudes toward others (Navarrete et al., 2021). Moreover, with the raise of technology and the increasing number of mobile apps and websites delivering mindfulness and compassion exercise (e.g., Headspace, www.headspace.com), people are becoming progressively familiar with the possibility to perform those exercises remotely, further promoting high accessibility of those services to a wide range of the population.

6.2. Individual and interpersonal benefits of training compassion

The effectiveness of compassion trainings has been proven in several domains, from the clinical to the social-psychological field, thus becoming a resourceful tool both at the individual and at the interpersonal level. For instance, research supporting the positive effects of compassion training in promoting individual well-being showed that training compassion affects emotional and cognitive factors related to flexibility and adaptive functioning. In a randomized control trail involving a community sample of adults, Jazaieri et al (2014) found that participants who completed a 9-week CCT (vs. waitlists) self-reported to be less worried and happier, to endorse lower levels of emotional suppression, and to be more mindful. A similar result was found in a

sample of breast cancer survivors, who did an 8-weeks CBCT: participants who did the program (vs. controls) showed an increased psychological well-being, as shown by a decrease in the frequency of depressive symptoms and intrusive thoughts (Dodds et al., 2015). On the one hand, these results suggest that compassion trainings could directly foster happiness and eudaimonic well-being; on the other, they might promote a reframing of negative and distressing events, so that they are perceived as less overwhelming or aversive. Importantly, research showed that training compassion does not solely affect individuals' perceptions of distressing events, there is also preliminary evidence supporting its impact on psychobiological responses related to stress: in studies involving undergraduates (Pace et al., 2009) and adolescents in foster care (Pace et al., 2013), compassion-based meditation (CBCT) reduced signs of inflammation and stress.

Being an other-oriented emotion, it is not surprising that fostering compassion has huge implications also at the interpersonal level. First of all, compassion trainings increase perceptual accuracy: results of a study (Mascaro et al., 2013) employing a sample of adults with no experiences in meditation showed that participants who did the CBCT (vs. controls) developed higher levels of empathic accuracy, assessed both via a self-report task (i.e., inferring emotions felt by other people by looking at pictures of their eyes) and physiological measures (i.e., registering neural activation in different brain areas). These results support the idea that compassion trainings enhance sensitivity to others' suffering and emotion recognition, that are *sine qua non* conditions to experience compassion (Strauss et al., 2016).

Further evidence concerns the effects of compassion training on aversive responses. As widely discussed in the previous chapters, high sensitivity to the suffering of others might lead to personal distress and avoidant behaviors, rather than to proactive behaviors aimed at helping others (Strauss et al., 2016). Before and at the end of an intensive meditation program, participants were presented with film clips picturing human suffering, and their facial expressions were recoded. Results showed that, compared to wait-list controls, people who completed the intervention showed more facial expressions of sadness and fewer expressions of rejection in reaction to the clips

(Rosenberg et al., 2015). These findings suggest that compassion-based meditation promotes engagement with others' suffering, rather than avoidance. Importantly, avoidant behaviors in the face of others' suffering might not be solely due to a general aversion to negative stimuli, rather they could occur because of the peculiarities of the person who is suffering. As discussed in the previous chapters, there are different factors affecting the way we perceive others' suffering, as well as compassionate responding. Examples are similarity to the target (Valdesolo & DeSteno, 2011), target's behavior (Batson et al., 2007; Decety et al., 2010), or group membership (Riva and Andrighetto, 2012; Xu et al, 2009). Within this framework, promising evidence comes from Kang and colleagues (2014), who found that a loving-kindness meditation (i.e., a training related to compassion, aimed at fostering affection, care, and wishes of well-being toward others) reduced implicit discrimination toward stigmatized groups. Compared to controls, participants who did the training showed fewer implicit, but not explicit, bias toward both homeless and Black people.

Finally, there is a growing line of research supporting the effects of compassion training on prosociality, corroborating the idea that compassion is a strong motivator in helping behaviors (Strauss et al., 2016). In a lab-based experiment, participants were assigned to either a short memory training or to a short compassion training (both lasting one day); then, they played a computer-based prosocial game. Results showed that, compared to participants assigned to the memory training, those who completed the compassion training acted more prosocially within the context of the virtual game (Leiberg et al., 2011). A similar result was found by Condon et al. (2013), who employed an ecologic measure to assess helping behaviors. Specifically, in their study, participants could be assigned to a control condition (i.e., waiting list) or to one out of two meditation protocols: either a to mindfulness or to a compassion training. After eight weeks (i.e., the length of both trainings), participants were told that they had to complete a cognitive task in the lab. Each participant arrived individually to the lab and was brought to a waiting room with three chairs, where two female confederates were already sitting. One minute after the participants seated in the remaining chair, a third confederate arrived. The girl was visibly suffering because of the

high heel shoes she was wearing and leaned back against a wall in discomfort, given that no seat was available. The authors measured whether and when (within a two-minutes range) the participant would give up their seat to the confederate in discomfort. Results revealed that participants assigned to both meditation trainings (i.e., mindfulness and compassion) showed enhanced prosocial responding, by offering their seat to the suffering girl more often than controls. Importantly, this result was found even in presence of the two confederates who were disregarding the suffering of the girl (i.e., bystander effect; Darley & Latané, 1968).

Overall, these studies corroborate the multiple benefits of meditation trainings – often compassion-based or closely related to it – in promoting positive outcomes not only at the individual, but also at the interpersonal level. On the one hand, among these studies, the majority assessed recognition of and reactions to the suffering of strangers, namely targets participants did not know and of whom they didn't have a clear opinion about. On the other hand, there is also preliminary evidence in support of the idea that compassion-related trainings might have the potentiality to broaden the range of people toward whom we could react compassionately (i.e., Kang et al., 2014), such as people we dislike or judge negatively. Despite that, further investigation is required, and literature on compassion trainings still needs to address this gap.

6.3. The Buddhist perspective: Compassion based on biology and on reason

In Buddhism, to truly feel compassion for someone, we need to feel love for them (i.e., wishing them to be happy). Through love, we are able to feel close to those who are suffering and we gain a deep understanding of their state. However, to feel love for someone, we must see that person in a positive light: this is the key variable that allows us to truly wish others to be happy and free from suffering (Dalai Lama & Chodron, 2020). This process is easy when the target of compassion are people for whom we already experience positive feelings, such as relatives and close others. However, sometimes we face the suffering of people that we did not know or, worse, that we dislike. In these cases, a further effort is required, which goes beyond feeling: to generate compassion for such people, we should also employ reasoning.

Against these premises, Buddhist tradition makes a distinction between two forms of compassion, namely compassion based on *biology* and on *reason* (Dalai Lama, 2006). The first type of compassion arises from the love we experience toward relatives and people who are close to us, for whom we experience a deep love and affection. This form of compassion is defined as "based on biology", because it is innate and does not require rationality. Just as in the case of parents and newborns, who experience a natural bond with each other, compassion based on biology arises automatically and stems from a visceral evolutionary need: the necessity of survival. According to Buddhism, despite compassion based on biology is fundamental and sets the ground for more complex compassionate expressions toward others, we must also be careful because, being mixed with attachment, this kind of compassion is potentially biased. Importantly, in Buddhism, the term "attachment" has a different connotation compared to the one used in developmental psychology (Sahdra & Shaver, 2013). This concept emphasizes the need and the desire to be attached to things or persons, overexaggerating their qualities, without being able to let them go (Dalai Lama, 2001). Therefore, given that this form of compassion stems exclusively from love toward people we are affectionate to and it is dependent on their actions and attitudes, it could be less stable. On the one hand, if the people we are attached to harmed us or their behavior did not meet our expectations and needs, our compassion for them could rapidly fade and even turn into animosity. On the other hand, being deeply grounded in love and affection experienced for close others, it might be harder to extend this compassion toward all human beings, especially toward those who we dislike or perceive negatively.

Given that genuine compassion should arise irrespectively of others' actions and attitudes toward us, Buddhism also conceptualized another form of compassion, called "compassion based on reason" (Dalai Lama, 2006). This kind of compassion is more complex and, as the word says, is not solely based on feelings, it also entails a deep sense of understanding and respect toward others. Indeed, reasoning should help us overcome biases and favoritisms that are dependent by the vagaries of how others behave, and to develop a more stable perception of others and their

suffering. When we develop this genuine form of compassion we shift our perspective, which becomes less egocentric. We realize that others are the same as we are in their wishes to reach happiness and in their desire to avoid suffering, and that everyone, just like us, have the right to overcome suffering (Dalai Lama & Chodron, 2020). For this reason, we become less biased and, consequently, more able to feel compassion toward people we dislike, and even toward our enemies. Obviously, this process is not easy, as to develop deep reasoning, a great commitment is it required: we must understand that there are no true differences between us and others, whoever they are, abandoning our self-centered attitude and equalizing self and others. This process allows us to feel indiscriminate love and constitutes true compassion.

Chapter 7. Training the heart and the mind (Studies 4 & 5)

7.1. Study 4: Training compassion and negative targets

7.1.1. Aims and Hypotheses

The present research is the first part of a set of two studies testing whether different compassion trainings enhance compassionate and prosocial responses to the suffering of negatively perceived targets. Importantly, although the benefits of training compassion are well established (for a review see Skwara et al., 2017), to date research on compassion trainings applied to negative targets, such as offenders and transgressors, remains widely unexplored. First, no systematic protocol has been developed to address this issue. Second, most trainings only prime compassion that arises from the love for relatives and close others, without taking into account the rational component of compassion (Dalai Lama, 2001). The novelty of this work lies in its willingness to fill those gaps. Starting from the Buddhist conceptualization of compassion based on *biology* and on *reason* (Dalai Lama, 2006), we aimed at developing and two different short trainings, each one priming one of the two forms of compassion. We hypothesized that both trainings (vs. a control condition) will lead people to experience higher compassion (H1a) and prosocial intentions (H1b) toward a suffering target committing an interpersonal transgression. Importantly, we decided to take an exploratory approach in testing whether one of the trainings works best than the other (H2). This decision depends on the fact that –to our knowledge– our study is the first attempt to empirically test the distinction among those two forms of compassion and there is no scientific evidence that can drive our hypothesis.

7.1.2. Method

The Psychological Research Ethics Committee of the University of Padova approved the procedures of Study 4 and 5, protocol #5033.

Participants. Five research assistants carried on the data collection in exchange of course credits, between April and May 2021. Due to resources constraints, we did not establish the sample

size a priori. As for the previous studies, the survey was administered online with a snowball procedure: the research assistants collected a convenience sample of Italian adults recruited from the general population, spreading the survey link to their acquaintances and in various social media groups unrelated to them. Participants (initial N = 152) were excluded according to two sampling criteria, established prior to data collection: (a) when they did not finish the survey or withdrew post-experimental informed consent (N = 1); (b) when they reported not to feel concentrated enough while undertaking the compassion trainings ("While you were doing the exercise, how much did you follow the instructions?"; 1 = *Not at all*, 7 = *A lot*). Participants answering under the midpoint of the scale –3 or below– were eliminated (N = 12). The final sample included 139 participants (M = 68, F = 71), who completed an online questionnaire individually and voluntarily, without receiving any compensation. Participants' age ranged from 18 to 81 years (M_{age}=33.75, SD_{age}=15.74); their occupations were as follows: 6.57% were manual workers; 8.76% were specialized workers, 28.47% were retailers, employees, or primary-school teachers; 5.11% were professionals, high school or academics; 40.87% were students; and 10.22% were retired, unemployed or housekeepers; the remainder of the sample did not provide this information. As for participants' education: 10.37% attained primary or middle school; 34.07% had a high school diploma; 37.78% had a Bachelor degree; and 17.78% got a Master degree or a PhD.

Procedure and measures. As in the previous studies, participants were told that the research aimed at investigating their attitudes toward people going through a difficult time. Moreover, given that we wanted to avoid mentioning the compassion trainings in order not to influence participants, we told them that they would have been asked to undertake a "reflection exercise". At the end of the survey, we debriefed and informed participants on the real purpose of the study, and they had the possibility to withdraw their consent to participation.

After providing information concerning their socio-demographic data, participants were assigned to complete either one of the two compassion trainings (i.e., Affective and Rational-Affective) or an active control condition (between-participants design). The trainings were

specifically designed for this study. Instruction of both trainings and the active control condition were presented over speakers or headphones, in the format of audio-guided exercises, and lasted about 6 to 7 minutes. Italian transcriptions of the trainings and the control condition are available in the Appendix.

All participants began listening the instruction to close their eyes and take deep breaths. The Affective training condition (N = 47) primed compassion based on biology. Participants were told to visualize three people for whom they have deep affection and love, standing in front of them. Then, participants were asked to focus on the positive feelings they experience for those people and, following, to focus on and be in contact with the suffering that those people could experience in their lives. After being in contact with such suffering, both at the emotional and cognitive level (i.e., through perspective taking), participants were asked to imagine that those people could be free from suffering and that they could do something to make it happen. Finally, participants were told to extend this feeling toward all human beings, by focusing on this sense of expansion and on their wish to help others.

The Rational-Affective training (N = 48), which primed compassion based on reason, had a similar structure. Participants had to visualize three people standing in front of them: (a) a loved one (as in the Affective training); (b) a stranger, for whom they do not have strong feelings (neither positive or negative); (c) a difficult target, like someone they find annoying and for whom they feel hard feelings. Then, participants were asked to make the effort of detaching from the categories and the judgements they associated to the three people. Participants reasoned on how this detachment could allow them to progressively realize that these categories and judgements only exist in their mind and, for this reason, they are merely contextual and superficial. Then, participants were asked to try to be in contact with the suffering that those three people could experience or have experienced in their lives. Consequently, they had to focus on the shared similarities with them, by realizing that they are equal in their wish to seek a happy, suffering-free life, just like all human beings. Participants needed to reason that the three people, just like themselves and all human

beings, sometimes make mistakes and fail to avoid suffering and to reach happiness: that might lead them to act out of confusion and in wrong ways. After gaining this understanding, the final part of the training was equal to the Affective training: participants were asked to imagine that those people could be free from suffering and that they could do something to make it happen. Finally, they had to extend those feelings toward all human beings.

Finally, the active control condition (N = 44) was a neutral cognitive task, adapted from Hutcherson et al. (2008). It was designed to be as structurally similar as possible to the compassion trainings, while remaining affectively neutral. Participants were asked to visualize three strangers – for whom they did not have any strong feeling– standing in front of them, and to progressively focus on their physical appearance, starting from their face, up to their bodies and their clothes. The control condition ended with a cognitive relaxation phase.

Once participants completed the trainings or the control condition, they were asked to self-report how much they were concentrated doing the exercise. Then, participants were all asked to read the same scenario. Similar to previous studies, the story was presented as if it was allegedly published in an Italian local newspaper (see Appendix for Italian original version). The scenario described the story of a fictious target (Valerio Bertoldo), a biker who was involved in a car accident, reporting severe injuries. Importantly, participants learned that when he was hit, the target was committing a transgression: he was trying to run away on his motorbike because he had a serious fight with a woman at the market square, which ended with the target grabbing and pushing her to the ground. As for the previous studies, we were interested in assessing compassionate reactions and helping intentions toward the transgressive target, thus his suffering needed to be salient. For this reason, in the final section of the article we underlined his deep physical and mental pain consequent to the accident.

After reading the fictious article, participants answered to two sliders assessing their perception of the target ("How would you see Valerio Bertoldo as a person?"; 0 = As a negative person, 100 = As a positive person) and his behavior ("How would you judge Valerio Bertoldo's

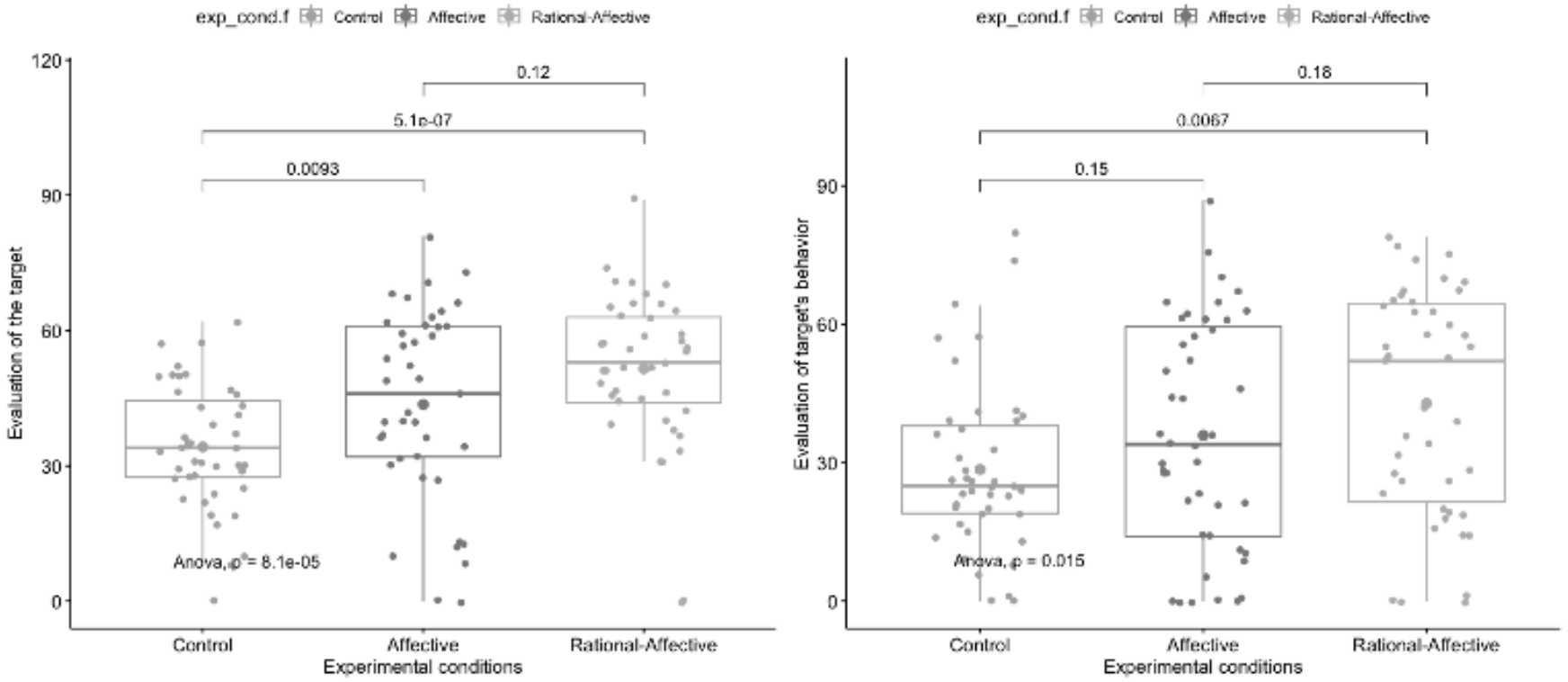
behavior?"; 0 = Negative, 100 = Positive"), to assess whether they perceived him negatively. Importantly, these items were similar to some of those employed in Study 3a and 3b, when we assessed participants' opinions toward the target, as a possible mediator. However, this time we used them for a different purpose. In Study 3b, we hypothesized that opinions toward the target would work as a mediator in the Fairness conditions, which were not taken into account in this study. Thus, we decided to employ those two items as a check of the effectiveness of our scenario. We did not have a manipulation check, because all participants read the same article, but we still wanted to measure whether they perceived the target negatively, similarly to what we did in Study 2. We then assessed the study's dependent variables with the same measures employed in Studies 3a and 3b: participants' compassionate reactions (α = .85) and prosocial intentions (Voci & Pagotto, 2009; α = .86) toward the suffering target.

7.1.3. Results and discussion

We employed the software R (R Core Team, 2022) to perform statistical analyses of this study. First of all, we calculated the mean score for participants' perception of the target (M = 42.98, SD = 18.89) and his behavior (M = 35.78, SD = 23.17). In both cases, mean points were below 50 –the midpoint of the scale–, suggesting that participants tended to attribute a negative connotation to the target and his actions, as we expected. Nevertheless, given that participants answered to those items *after* completing the trainings or the control condition, we also expected that there could be differences in their perception of the target, according to the experimental condition they were assigned to. Therefore, we performed two one-way ANOVAs, also employing t-tests to check for statistically significant mean differences between the conditions, compared in pairs. Results (Figure 1) of the ANOVAs were in line with our intuition: even though each group generally evaluated the target and his behavior negatively, participants differed in their evaluation of the target, $F(2, 122) = 10.18$; $p = <.001$, $\eta^2 = .14$, and his behavior, $F(2, 127) = 4.32$; $p = <.01$, $\eta^2 = .06$, according to the condition. Specifically, participants assigned to the active control condition ($M_{Control} = 34.21$, $SD_{Control} = 13.56$) perceived the target more negatively than those assigned to both

the Affective ($M_{Affective}$ = 43.63, $SD_{Affective}$= 21.30) and the Rational-Affective ($M_{Rational\text{-}Affective}$ = 51.54, $SD_{Rational\text{-}Affective}$ = 17.34) training conditions (significant differences at $p <$ .001). As for the evaluation of the target's behavior, we found a significant difference ($p <$ .001) between participants who completed the active control task ($M_{Control}$ = 28.53, $SD_{Control}$ = 18.26) and those assigned to the Rational-Affective training ($M_{Rational\text{-}Affective}$ = 42.86, $SD_{Rational\text{-}Affective}$ = 24.28), but no difference (p = .15) with those who did the Affective training ($M_{Rational\text{-}Affective}$ = 35.93, $SD_{Rational\text{-}Affective}$ = 24.63). For both items, means did not differ significantly in the two training conditions (p > .05).

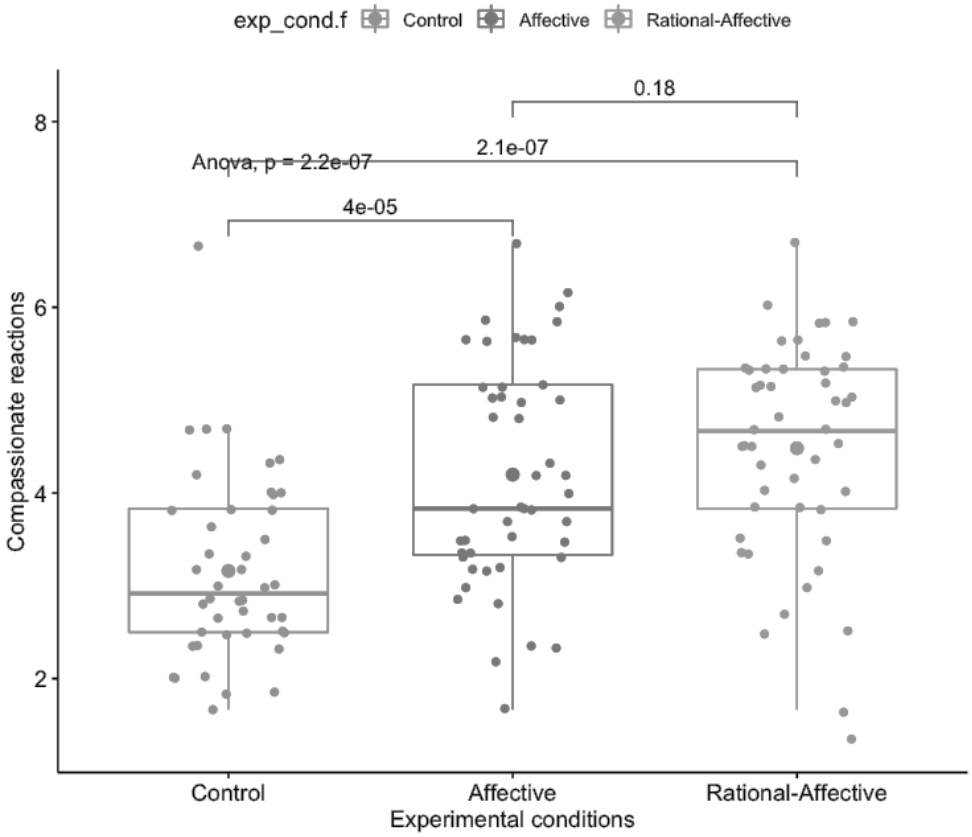
Figure 1. Boxplot of the one-way ANOVA and t-tests; DV: evaluation of the target and his behavior.



The present results could be interpreted as a first empirical support of the effectiveness of our trainings in increasing overall evaluations toward a suffering target who behaves negatively, and can be related to recent evidence showing that a short compassion-based meditation increases positive attitudes toward others (Navarrete et al., 2021). Importantly, it is noteworthy to mention that we found stronger result –both in terms effect size and effectiveness of the trainings– for the item measuring an overall evaluation of the target *as a person*. Instead, when participants evaluated the target's behavior, only those who completed the Rational-Affective training perceived it less negatively. These results are consistent with the aim and structure of the training and with the Buddhist idea that compassion based on reason is an important and powerful concept. Arguably, it could be easier to foster general better evaluations toward others, but when it comes to evaluating something more specific such as their behavior, a training based on reasoning on why people might act wrongly is more effective.

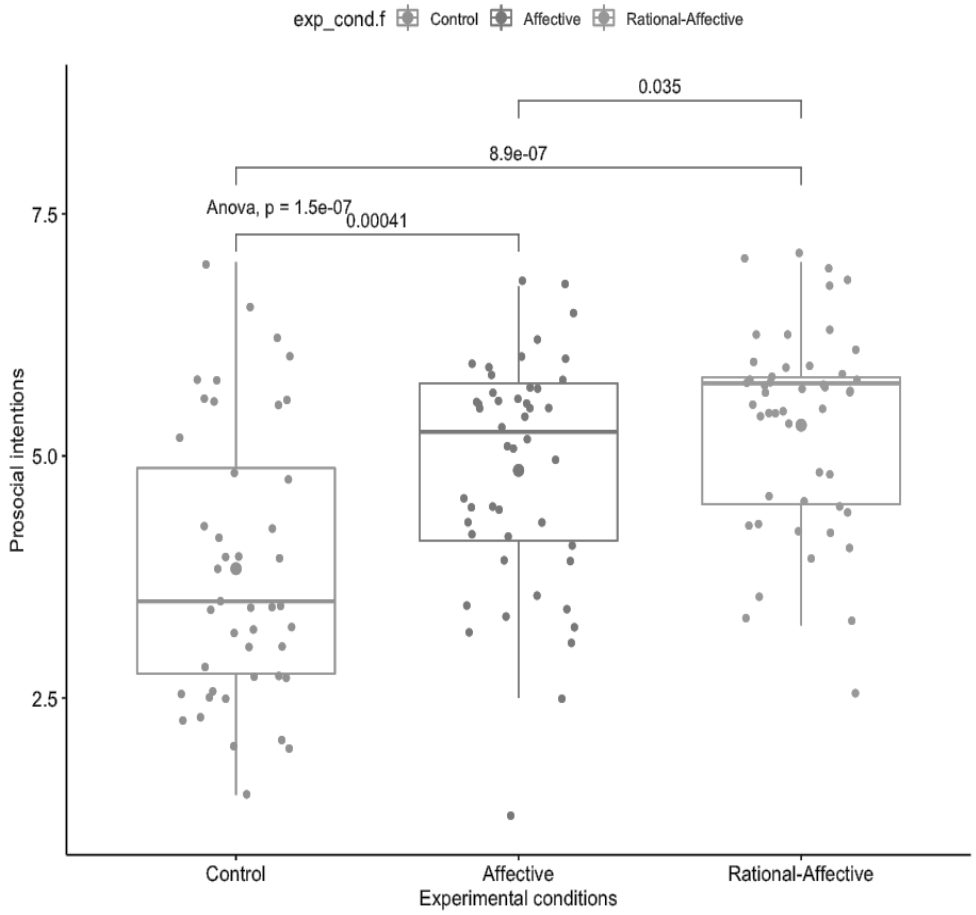
To test our main hypotheses, we again employed one-way ANOVAs and t-tests to test the statistical significance of the differences between the means in two different conditions. In line with H1a, results showed that participants differed in their level of compassionate reactions toward the target according to the condition they were assigned to, $F(2, 136) = 17.17$; $p = <.001$, $\eta^2 = .20$. T-tests (portrayed in Figure 2) showed that participants who completed the Affective training ($M_{Affective} = 4.20$, $SD_{Affective} = 1.21$) felt more compassion for the target than controls ($M_{Control} = 3.16$, $SD_{Control} = .99$). The same result was found when we compared participants assigned to the active control condition and to the Rational-Affective training ($M_{Rational\text{-}Affective} = 4.48$, $SD_{Rational\text{-}Affective} = 1.17$). These differences were significant at $p < .001$. Finally, no significant difference ($p = .18$) was found between the means of participants assigned to the two training conditions.

Figure 2. Boxplot of the one-way ANOVA and t-tests; DV: compassionate reactions.



As for prosocial intentions (H1b), results were similar to those found for compassionate reactions: there was a significant difference in participants' levels of prosocial intentions toward the target according to the experimental condition, $F(2, 136) = 17.67$; $p = <.001$; $\eta 2 = .21$. T-tests (Figure 3) showed that, compared to those assigned to the active control condition ($M_{Control} = 3.84$, $SD_{Control} = 1.41$), participants reported more prosocial intentions toward the target when they completed the Affective training ($M_{Affective} = 4.85$, $SD_{Affective} = 1.18$), as well as when they did the Rational-Affective training ($M_{Rational\text{-}Affective} = 5.32$, $SD_{Rational\text{-}Affective} = 1.04$). These differences were significant at $p < .001$. Importantly, this time we also found a significant difference ($p = .035$) in the means of the participants assigned to the Affective and the Rational-Affective trainings, with the latter showing more prosocial intentions toward the target.

Figure 3. Boxplot of the one-way ANOVA and t-tests; DV: compassionate reactions.



Results of this study are a promising step forward in studying how short compassion trainings can foster better emotional and prosocial reactions toward a negatively perceived suffering target. Importantly, our main hypotheses (H1a, H1b) were confirmed: compared to active controls, participants who completed both the Affective and the Rational-Affective training self-reported higher compassionate reactions and prosocial intentions toward a target who committed an interpersonal transgression and then was found to be in a suffering state. These results are particularly relevant for several reasons. First, they expand current scientific literature on the effects of compassion trainings, which are generally targeted to improve reactions toward strangers (e.g., Condon et al., 2013; Hutcherson et al., 2008; Leiberg et al., 2013), rather than toward targets who behave or are perceived negatively. Moreover, our results concerning compassion trainings align with previous evidence showing that eliciting compassion toward someone, counteracts desires of punishment and revenge toward a third party, who acts transgressively (Condon & DeSteno, 2011).

Second, our results showed that even a 6 to 7 minutes exercise was sufficient to induce changes of small effect size, corroborating and adding to current scientific literature on the effects of short compassion trainings at the interpersonal level (e.g., Hutcherson et al. 2008; Leiberg et al., 2013; Navarrete et al., 2021). Importantly, being more accessible and less costly to undertake in comparison with traditional and more structured weekly trainings, short compassion trainings could become a viable resource to initially foster positive behaviors toward others on a large scale. Third, this study is, to our knowledge, the first empirical attempt to disentangle the dual conceptualization of compassion theorized in Buddhism. Results of our study seem to partially support the Buddhist argument: compared to those who completed the Affective Training, participants assigned to the Rational-Affective trainings self-reported higher prosocial intentions toward the negative target. Arguably, a more rational form of compassion based on understanding and respect, which focuses on feelings and emotions but also on reasoning, is even more effective in improving reactions toward people behaving negatively.

Despite those encouraging results, our findings are preliminary and further investigation that can corroborate them is required. First, we should test whether these results can be replicated in a different–and possibly larger– sample. Second, we should also take into account dispositional compassion, to test whether the trainings work regardless of participants' levels of dispositional compassion. Third, similarly to the previous studies of this thesis, it would be relevant to manipulate the valence of the target (positive vs. negative) and to test whether exposing individuals to collective (rather than interpersonal) transgressions, could lead to similar outcomes. These open points have been considered and tested in Study 5.

7.2. Study 5: Training compassion and negative (vs. positive) targets

7.2.1. Aims and Hypotheses

Study 5 is the second part of a set of studies investigating the effectiveness of training different forms of compassion –i.e., based on *biology* and on *reason* (Dalai Lama, 2006)– in promoting better emotional and prosocial reactions toward a negatively perceived suffering target

who act transgressively. Specifically, this study aims at: (a) corroborating and expanding previous results, also considering the limitations of Study 4 (i.e., small sample size); (b) taking into account elements of Studies 2, 3a, and 3b, namely the valence of the suffering target (positive vs. negative) and the collective nature of his behavior, either as benefit or a threat at the community level; (c) exploring whether the effects of the trainings hold regardless of participants' levels of dispositional compassion. We hypothesize that both trainings will lead people to experience the same level of compassion (H1a) and prosocial intentions (H1b) for the positive and negative suffering targets. Differently, in the control condition the negative target will elicit lower levels of compassionate reactions and prosocial intention than the positive target. As for Study 4, H2 was driven by an exploratory approach: we aimed at testing which training work best, also considering the valence of the target. Finally, we hypothesized that the compassion trainings will work regardless of participants' levels of dispositional compassion (H3).

7.2.2. Method

Participants. Bachelor students of a social-psychology class at the University of Padova collected a convenience sample of Italian participants (initial N= 1107), in change of course credits. Students were carefully instructed by the authors to collect a variegate sample, which did not include fellow classmate nor psychology students, who might be familiar with research methodology and research designs. We employed the same exclusion criteria applied in Study 4: participants were eliminated if they did not finish the survey or withdrew post-experimental informed consent (N = 266) and when they reported not to feel concentrated enough while undertaking the compassion trainings (N = 57). Additionally, we did not consider participants who failed at least one out of three manipulation-check items (N = 87), which will be described the following paragraph. As for previous studies, we did not establish the sample size a priori, due to resource constraints. The final pool of participants included 697 Italian adults (M = 256, F = 409, NB = 6, the rest did not report their gender), whose age ranged from 18 to 88 (M_{age}= 30.05, SD_{age} = 16.18) and who completed the questionnaire individually and voluntarily, without any

compensation. As for their jobs, 1.74% were manual workers; 3.48% were specialized workers, 26.12% were retailers, employees, or primary-school teachers; 5.81% were professionals, high school or academics, 57.04% were students, and 5.81% were retired, unemployed or housekeepers (the remainder of the sample did not provide this information). Finally, 7,66% of participants reported to have attained primary or middle school; 68.64% had a high school diploma; 11.42% had a Bachelor degree; and 12.28% a Master degree or a PhD.

Procedure and measures. We presented participants with the same cover story used in previous studies (i.e., the aim of research was investigating their attitudes toward people going through a difficult time) and, as in Study 4, we told them that they needed to complete a "reflection exercise". We debriefed them on the real purpose of the study at the end of the survey, providing participants the possibility to withdraw their consent.

For Study 5, we employed a 3 x 2 between participants research design. We manipulated participant's exposure to the audio-guided exercise (Training Factor: Active control vs. Affective training vs. Rational-Affective training), as well as the valence (Valuing Factor: High vs. Low Valuing) of the suffering target presented, who either behaved positively at the collective level or committed a collective transgression. The combination of the two factors resulted in six experimental conditions; participants' distribution among the conditions is reported in Table 1.

Table 1. Participants' distribution among the experimental conditions of Study 5.

		Training Factor		
		Active Control	Affective Training	Rational-Affective Training
Valuing Factor	High Valuing	135	105	98
	Low Valuing	108	118	133

The study had the following structure: first, we collected socio-demographic information; then participants completed either one of the trainings or the active control condition. The trainings and the control condition were the same audio-guided exercises used in Study 4, presented to

participants over speakers or headphones. After completing either one of the trainings or the active control condition, participants reported how much they were concentrated doing the exercise (same question as Study 4). Then, participants were assigned to read one out of two fictious scenarios, presented as articles allegedly published in an Italian local newspaper. Importantly, the two scenarios were the same fictious articles presented to participants in Studies 3a and 3b, in the High Valuing and Low Valuing Care conditions. This decision lies upon our willingness to understand whether manipulating compassion, rather than assessing it at the dispositional level, might lead to different results than those found in Study 2, 3a, and 3b. Arguably, increasing state-level compassion through specific trainings could foster better emotional and prosocial reaction toward negatively perceived suffering targets, even when they transgress a norm that explicitly harms other people's well-being.

After article reading, we assessed whether participants paid attention to the content of the scenario they were assigned to, via two manipulation checks items. The first item was the same employed in Study 3a and 3b for the Care conditions: in a multiple-choice question participants had to recall on which project the target's company was working on when the accident occurred (correct answer varied according to the experimental condition). Additionally, we added a second question, which varied according to the scenario participants read. In the Low Valuing condition, participants were asked to recall what there used to be in the space where the target's company was now building (multiple choice answer: either a social cooperative or a parking spot). In the High Valuing condition, participants had to indicate who paid for the renovation of the social cooperative (multiple choice answer: either the Town Council or the target's company).

Subsequently, in a separate section of the survey, we administered the same measures employed in the previous studies (i.e., 3a, 3b, 4) to assess our dependent variables, namely compassionate reactions ($\alpha = .90$) and prosocial intentions ($\alpha = .73$) toward the suffering target. Then, we assessed participants' levels of dispositional compassion. As in Studies 2, 3a, and 3b, we employed our Italian validated version (Lucarini et al., 2022) of the Compassion Scale (CS;

Pommier et al., 2020), aggregating the 16 items, in order to obtain an overall score of dispositional compassion (α = .82). Finally, before post-experimental informed consent, we administered a third manipulation check item, which concerned the content of the audio-guided exercise. Participants had to recall what kind of people (i.e., three loved ones; three strangers; a loved person, a stranger, and a disliked person) they were asked to visualize while undertaking the exercise (multiple choice answer, correct answer varied according to the experimental condition).

7.2.3. Results and discussion

Analyses were performed on R (R Core Team, 2022). To test our first set of hypotheses (H1a and H1b, H2), we ran two 3 x 2 ANOVAs. In the first model, we tested the effect of the Training factor, the Valuing factor, and their possible interaction on participants' levels of compassionate reactions toward the target. Concerning compassionate reactions, results of the ANOVA (Table 2) showed that the both the Training factor and the Valuing factor had a main effect on the dependent variable. Importantly, and in line with our expectations, we also found a statistically significant interaction between the effects of the Training and the Valuing factors on compassionate reactions experienced for the suffering target.

Table 2. Results of 3 x 2 ANOVAs. Dependent variables: Compassionate reactions; Prosocial intentions

Dependent variables	Independent variables	*df*	Sum Sq.	Mean Sq.	*F*	η	*p* value
Compassionate reactions	Training	2	23.5	11.77	7.936	.028	<.001***
	Valuing	1	57.0	57.03	38.441	.053	<.001***
	Training*Valuing	1	12.5	6.24	4.208	.012	.015*
Prosocial intentions	Training	2	9.3	4.64	3.977	.013	.019*
	Valuing	1	23.9	23.86	20.450	.029	<.001***
	Training*Valuing	1	4.3	2.16	1.848	.005	.158

Note. * $p < .05$, *** $p < .001$.

Pairwise comparisons (contrasts) of estimated marginal means (package *emmeans*; Russell, 2022) were employed to disentangle the interaction effect. Results (Table 3, Figure 4–Panel A) partially confirmed H1a: as hypothesized, the negative target elicited fewer compassionate reactions than the positive target in active controls. As for the training conditions, results showed that the level of compassionate reactions experienced for the negative and the positive suffering targets did not differ significantly when participants completed the Affective training, while a difference was present for the Rational-Affective training, with lower levels of compassionate reactions in the Low Valuing condition.

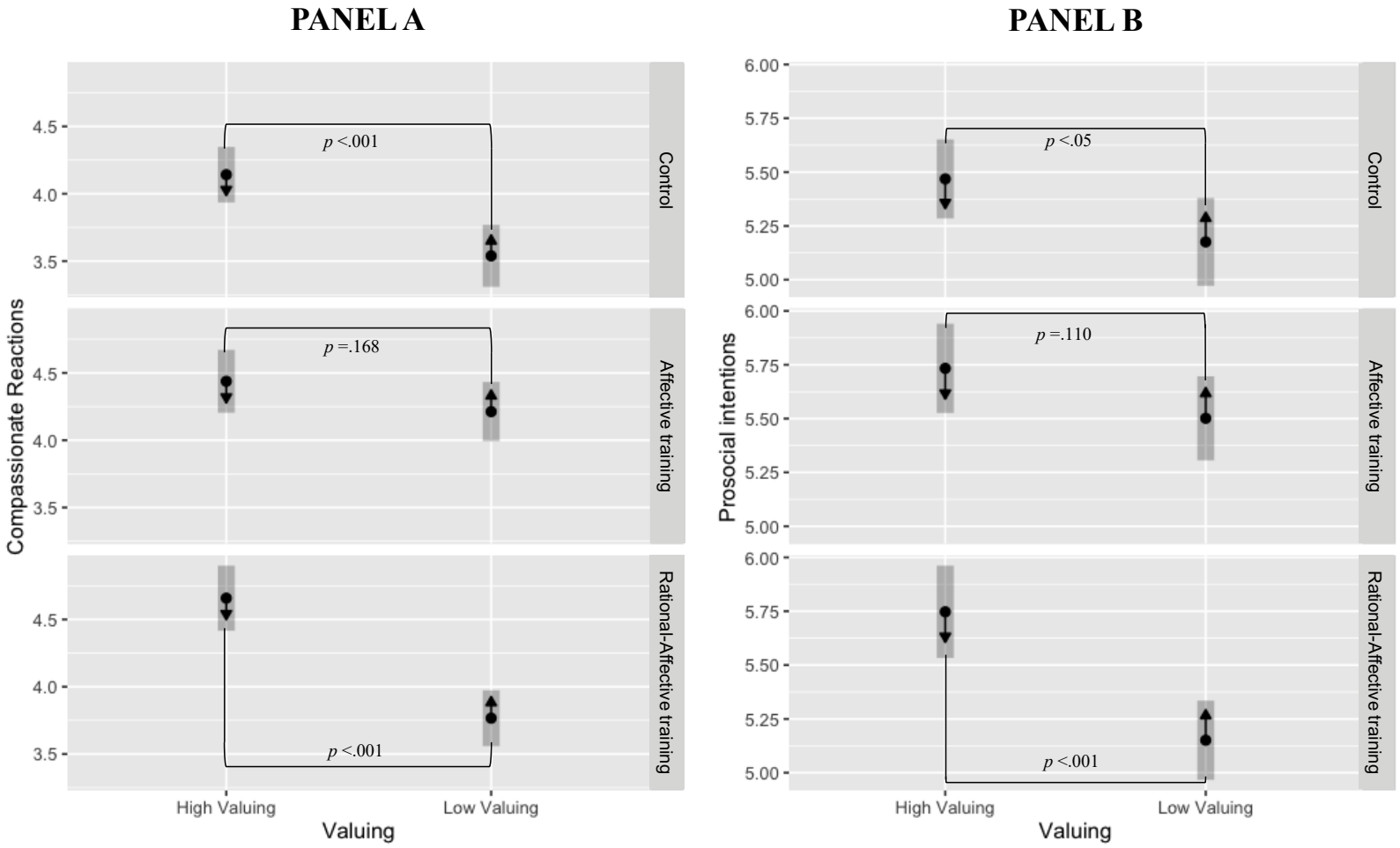
Subsequently, we tested the same model, considering prosocial intentions as the dependent variable. This time, results of the ANOVA (Table 2) did not meet our predictions (H1b). We only found significant main effects, of both the Training factor the Valuing factor, whereas the interaction among the two factors did not reach the standard threshold of significance. However, when we portrayed the results graphically (Figure 5–Panel B), we noticed that they had a similar patter to those found when considering compassionate reactions as the dependent variable. Consequently, with an exploratory purpose, we decided to run pairwise comparison of estimated marginal means. Results (Table 3, Figure 4–Panel B) were consistent with those found for compassionate reactions: when participants completed the Affective training, prosocial intentions toward the negative and the positive target did not significantly differ. Instead, the negative target elicited fewer prosocial intentions that the positive target, both in the active control condition and in the Rational-Affective training condition.

Table 3. Pairwise comparisons of estimated marginal means. DVs: Compassionate reactions; Prosocial intentions

				contrasts: High Valuing – Low Valuing				
Dependent variables	**Training Factor**	**Valuing Factor**	**marginal means**	**estimate**	**SE**	***df***	**t ratio**	***p-value***
Compassionate reactions	Control	High Valuing	4.14	0.603	0.157	691	3.836	<.001***
		Low Valuing	3.54					
	Affective training	High Valuing	4.44	0.226	0.163	691	1.381	0.168
		Low Valuing	4.21					
	Rational-Affective training	High Valuing	4.66	0.892	0.892	691	5.499	<.001***
		Low Valuing	3.77					
Prosocial intentions	Control	High Valuing	5.47	0.292	0.140	690	2.093	.037*
		Low Valuing	5.18					
	Affective training	High Valuing	5.73	0.232	0.145	690	1.600	.110
		Low Valuing	5.50					
	Rational-Affective training	High Valuing	5.75	0.596	0.144	690	4.148	<.001***
		Low Valuing	5.15					

Note. *$p < .05$, ***$p < .001$.

Figure 4. The effects of Training and Valuing factors on compassionate reactions and prosocial intentions



Notes. Estimated marginal means of compassionate reactions (**A**) and prosocial intentions (**B**) by Training and Valuing factors (Tukey adjustment for contrasts; bars: 95% confidence intervals; non-overlapping arrows: statistically significant pairwise comparison, $p < 0.05$).

Finally, to test H3, we ran two regression models. In both models, the Valuing factor (Low vs. High), two dummy variables representing the two trainings (Affective Training=1 vs. Rational-Affective Training=0 and Active control=0; Rational-Affective Training=1 vs. Affective Training=0 and Active control=0), dispositional compassion (centered), and their interaction were the predictors, whereas compassionate reactions and prosocial intentions were the dependent variables.

When compassionate reactions were the dependent variable, in line with our predictions, we found no significant interaction of dispositional compassion with the Affective training (β =.53, p = .08), nor with the Rational-Affective training (β =.09, p = .80), whereas the model (R^2 = .23) yielded a significant main effect of dispositional compassion (β = .81, p < .001).

Results were consistent with our predictions also for prosocial intentions. Similarly to the previous one, in this model (R^2 = .22), dispositional compassion did not significantly interact with the Affective training (β = -.04, p = .88), nor with the Rational-Affective training (β = .33, p = .25), while dispositional compassion had a significant main effect (β = .80, p < .001).

Study 5 had multiple aims. On the one side, it was meant to corroborate and expand results of Study 4, by testing the effectiveness of our compassion trainings on a larger sample, also taking into account relevant elements considered in the previous studies of this thesis, such as the comparison between positive and negative suffering targets, as well as the collective nature of their behavior, which could either preserve or harm others' people well-being. On the other side, we also aimed at testing whether compassion at the dispositional level interacted with the effect of the compassion trainings, with the idea that the latter should work regardless of participant's levels of dispositional compassion.

Results of Study 5 partially confirmed our hypothesis and are, to a certain extent, in contrasts with those of Study 4. As for H1a, in line with our expectations, results of the 3 x 2 ANOVA showed a significant interaction between the Training (Active control vs. Affective Training vs. Rational-Affective Training) and the Valuing (High Valuing vs. Low Valuing) factors

on compassionate reactions toward the target. Pairwise comparison of estimated marginal means, however, showed that H1a was partially confirmed: as predicted, participants experienced fewer compassionate reactions toward the negative (vs. positive) target when they were assigned to the active control condition. As for the training conditions, when participants completed the Affective training, they reported the same level of compassionate reactions for the negative and the positive target, proving its effectiveness. Instead, when they were assigned to the Rational-Affective training, the lack of compassionate reactions toward the negative (vs. positive) target persisted.

As for H1b, we did not find a significant interaction between the Training and the Valuing factor on prosocial intentions for the target, in contrast with our hypothesis. However, when –with an exploratory purpose–we estimated the marginal means and computed pairwise comparison, we found the same pattern as for compassionate reactions. Again, the only case in which the negative and the positive targets elicited the same level of prosocial intentions was when participants completed the Affective training. Importantly, this result cannot be interpreted as a confirmation of our hypothesis, due to the lack of interaction in the ANOVA. Nevertheless, the fact that we found the same trend for both dependent variables is promising and opens up to further discussion and investigation to disentangle the effects of the Affective training.

As in Study 4, H2 was exploratory. If, in Study 4, our results seemed to support the Buddhist conceptualization of compassion, which sees a form of compassion based on reasoning as more stable and effective than one solely based on love and affection (Dalai Lama, 2006); results of Study 5 did not match those findings. Considering results of both studies, we could argue that, overall, the Affective training seems to work better than the Rational-Affective, being steadily effective in both samples. Finally, H3 was confirmed: the lack of interaction effects among the trainings and dispositional compassion found in both regression model supported the idea that, potentially, our trainings could be a resourceful tool for anyone, despite their individual differences in dispositional compassion.

7.3. General discussion, Limits, and Future directions

There are various reasons that could explain the different pattern of results found in Studies 4 and 5 –as well as the ineffectiveness of the Rational-Affective training in Study 5. Importantly, these arguments also help outlining the studies' limitation and open up to key future directions.

First of all, Studies 4 and 5 have slightly different designs and, most importantly, they consider different kinds of transgressions, respectively an interpersonal and a collective transgression. The interpersonal transgression involves two targets –the transgressor and the victim– in a one-to-one dynamic, whereas the in collective transgression victims are less identifiable, being members of a community. Arguably, the peculiarities of the two transgressions played a role in determining why the Rational-Affective training worked –even slightly better that the Affective training– in Study 4, but not in Study 5, where only the Affective training was effective. Importantly, evidence that could partially support our claims comes from literature on compassion collapse (Cameron & Payne, 2011). This phenomenon occurs when people are exposed to the suffering of large groups: given that it regards a large number of individuals, such exposure could be highly overwhelming, thus people tend to downregulate their emotions and become less compassionate in front of it. In one of their studies, the authors found that when participants were told to experience and to be in contact with their emotions, rather than to down-regulate them, their compassion for the multiple victims did not collapse. Therefore, it is possible that when participants are exposed to transgressions involving a large number of people, as in Study 5, an intervention which is more focused on emotions, rather than reasoning, is more effective and that its beneficial effects are extendable to the negative target. Nevertheless, further investigation is needed and future studies should test whether our results are replicable, also comparing different kinds of transgressions.

Second, despite the two samples –of Studies 4 and 5– were not different in terms of basic socio-demographic characteristics, it is likely that they differed in others aspects that we did not assess, such has their meditation habits. For instance, participants of Study 4 might have been

averagely more skilled in meditation, compared to participants of Study 5, and thus more able to process the contents of the Rational-Affective training, which requires greater commitment and a deeper understanding that, instead, could be difficult to gain for nonmeditators. Future studies should take into account a broader range of characteristics of the participants, such as their previous meditation habits, to check whether there are differences in the results according to those characteristics.

Third as previously discussed, our Rational-Affective training was a first attempt to develop an intervention that primes more than the emotional side of compassion, stressing also on its rational component. According to Buddhism, developing compassion based on reason is like exercising a muscle, which strengthens over time, with effort and practice (Dalai Lama & Chodron, 2020). Consistently, as abovementioned, the Rational-Affective training entails a mental effort that requires complex reasoning in a short time span. Arguably, while being in contact with emotions is more automatic, especially if they are related to people we care about, making the effort of fully engaging in a reason-based exercise might be harder, especially when it lasts only a few minutes and participants are not familiar with meditation practices. Therefore, a training aimed at fostering compassion based on reason might benefit from a longer duration. Future studies should test this possibility, developing longer programs with multiple training session to be completed within a larger time range, so that participants could properly assimilate the key concepts of this training. Importantly, by testing the effects of longer and more structured training programs, one could also test whether those interventions increase stable other-oriented dispositions, thus promoting better characters, as current literature seems to preliminarily suggest (e.g., Jazaieri, 2013). Another future direction concerns the possibility to implement other core Buddhist concepts within the Rational-Affective training, which might favor the pursue of its aim and foster a greater understanding of others' suffering. An example regards the Buddhist concept of Interconnectedness, namely the perception that all non- living and living things, including the self, are connected among themselves and mutually affect each other (Dorje, 2017).

Fourth, a further limitation that we must acknowledge concerns the studies' setting. Indeed, despite online tools are a great resource for data collections, promoting higher accessibility and thus the possibility to collect larger samples, they also entail lack control from the experimenter and, possibly, more distractions for the participants. Despite we asked participants to do the experiment in a silent room, with the door closed, wearing headphones, arguably they could have benefited from a lab-based environment, which might promote greater ability to concentrate on the experimental tasks. Possibly, future studies should replicate the present findings in laboratory settings, where the experimenter has the possibility to properly supervise participants undertaking the training. Interestingly, another key future direction would be understanding whether the effects of compassion trainings in increasing emotional and prosocial reactions toward a negatively perceived suffering target persist in time, by employing longitudinal designs.

Finally, a few words to discuss the different pattern of results found when compassion is treated as a stable trait-like disposition or as a state-like emotion to be fostered are needed. In the discussion section of Chapter 5, we speculated that training compassion might lead to different outcomes than assessing it at the dispositional level, namely to positive emotional and prosocial reactions toward negatively perceived suffering targets. Data of Studies 4 and 5 supported our claims. Arguably, the inconsistencies between of results of Studies 2, 3a, and 3b with block of Studies 4 and 5 can be explained in light of the fact that-our compassion trainings directly prompt core Buddhist concepts, which might favor greater acceptance and tolerance toward negative suffering targets. Indeed, despite items of the Compassion Scale (i.e., the scale that we employed as a measure of dispositional compassion in the previous studies of this thesis; Pommier et al., 2020) take into account the concept of Common Humanity of suffering, which resonates with the Buddhist principle that compassion entails a universal understanding of pain in human experience, this concept is not stressed as when it is directly promped through a structured training. Arguably, our compassion trainings activate key concepts which have a pivotal role in leading people to

experience positive emotional and prosocial reaction toward all suffering targets, which dispositional compassion does not activate.

Overall, despite their limitations and their –sometimes– contrasting results, our studies are a promising step ahead in the study of short compassion trainings and their effectiveness. First of all, we made a first attempt to empirically test the dual conceptualization of compassion theorized in Buddhism. Second, we explored the effects of our short trainings in relation to the suffering of negatively perceived target, a topic that remains widely understudied in current scientific literature. Third, we proved their effectiveness –especially of the Affective training– in increasing compassionate and prosocial reactions toward targets behaving transgressively, both at the interpersonal and at the collective level.

Chapter 8. General Conclusion

8.1. Summing up the results

Compassion is an other-oriented construct based on concern, kindness, and care toward people who are suffering. But what happens when the sufferers are perceived as negative targets who act transgressively and violate social norms? Can compassion help promoting proper reactions to the suffering of others, even when they behave negatively? The present project was based upon these questions. Across eight studies, we explored in depth the construct of compassion, both treating it as a stable individual disposition and as a state-like emotion to be fostered.

The first set of studies allowed us to obtain two valid and reliable measures to assess dispositional compassion –as well as its facets– in the Italian population, which we could employ in the following studies of this project. Beyond that, Studies 1a,1b, 1c led to novel and important insights on the relationships among and the relevance of the facets of this construct. Finally, our studies allowed us to build a nomological net of the correlates of dispositional compassion, exploring its relationship with individual dispositions and socio-relational variables. We corroborated previous results concerning the relationship of compassion with other variables and highlighted new correlation patterns, also exploring the differences among the two scales.

The second part of the project still focused on dispositional compassion, which we assessed with the Compassion Scale (Pommier et al., 2020), one of the measures that we validated in Italian. Drawing upon the Buddhist idea that true compassion toward others can be experienced irrespectively of whether another person is a friend or an enemy (Dalai Lama, 2001), in Study 2 we tested the moderating role of dispositional compassion in promoting positive emotional and prosocial reactions toward targets behaving transgressively for different reasons (i.e., egoistic vs. altruistic vs. control), in the context of norm violations related to the Covid-19 pandemic. Importantly, despite we found a positive main effect of dispositional compassion, which support the

idea that being highly compassionate works as a protective factor promoting favorable reaction to the suffering of others, we also found that highly compassionate participants react less positively to the suffering of a target who commits an egoistic transgression (vs. the control condition, where no information was given on the reason why the target violated the norm). Importantly, this result adds complexity to the Buddhist idea that being compassionate entails a non-discriminant approach to the suffering of all people. According to our data, this is true only when compassionate participants lack cues concerning the reasons driving the target's behavior, arguably because they assume the best of him and give him the benefit of the doubt. Differently, when the target explicitly behaves negatively for self-interest motives, their reactions become harsher.

Starting from these unexpected findings, Studies 3a and 3b attempted to make a step further, in order to explain and expand results of Study 2. We hypothesized that highly compassionate people are particularly sensitive to norms violations that entail an explicit harm of others' well-being. To test this idea, we relied upon the Moral Foundation Theory (Haidt & Graham, 2007), focusing on Care and Fairness moral foundations. In a 2 x 2 design, we manipulated the behavior of the target (Low Valuing: negative and transgressive vs. High Valuing: positive and in line with a moral norm) and the salient moral norm (Care vs. Fairness). Our main hypothesis was confirmed only for prosocial intentions: as expected, we found a different pattern of results for participants high and low in dispositional compassion who were assigned to the Care conditions. Specifically, highly compassionate participants reported fewer prosocial intentions toward a target violating (vs. behaving in line with) a norm of Care. Instead, among participants low in dispositional compassion there was no difference in their self-reported level of prosocial intentions for the negative and the positive target. Moreover, and consistently with our hypothesis, in the Fairness conditions the pattern of results did not differ for people high and low in dispositional compassion: participants always reported fewer prosocial intentions toward the target acting transgressively (vs. in line with the moral norm). As anticipated, this result was not replicated for compassionate reactions, where no effect of the moral norm was found. Similar to Study 2, we found a negative two-way interaction

between dispositional compassion and the Valuing factor (Low vs. High). Simple slopes analyses showed that differences in the dependent variable scores between High and Low Valuing conditions were more pronounced when participants were highly compassionate at the dispositional level. Importantly, and beyond these interaction effects, we found a positive main effect of dispositional compassion on both dependent variables, consistently with Study 2 and with previous literature supporting an association of dispositional compassion with emotional resonance and helping behaviors (e.g., Gu et al; 2020; Pommier et al., 2020). Finally, Study 3b also shed light on the role that different cognitive and emotional factors have in mediating the effect of the target's behavior (transgressive vs. not) on the dependent variables, in the Care and Fairness subsamples. Results showed that compassionate reactions are associated with positive emotions in both Care and Fairness subsamples, whereas prosocial intensions are related to emotional processes when the norm of Care is salient and to evaluative processes when the norm of Fairness is salient. This result is consistent with previous literature associating moral issues of care and justice to different physiological processes (Robertson et al., 2007).

Overall, results of Studies 2, 3a, and 3b provide important insights on the ambivalent role of dispositional compassion which, despite its positive independent effect in increasing emotional resonance and helping toward suffering others, can also lead to harsher reactions, when a target behaves negatively toward others. A possible explanation for these results –which were not consistent with previous literature testing how inducing compassion led to decreased punishment (Condon & DeSteno, 2011) and more forgiveness (vanOyen Witvliet et al., 2015) toward transgressors– might concern the *nature* of the transgression committed by the target. Indeed, the transgressive behaviors that we took into account in our studies often threaten the communal goals related to taking care of others that stand as core values for highly compassionate participants (Lucarini et al., 2022). This claim is in line with the goal congruence account –according to which the degree of perceived congruency of a certain event with people's goals and values shapes their judgment of it (Lewin, 1935)–, as well as with previous studies showing that meditators (McCall et

al., 2014) and people high in agreeableness (Kammrath & Scholer, 2011) show harsher reactions and judgements toward targets harming others. Therefore, compassionate individuals might be generally oriented to react harshly when a transgressor causes harm to other people because they automatically tend to identify with the victims and feel their sorrow. When facing the suffering of the transgressor and a potential damage for other –innocent– people, attention and resources of highly compassionate people are mainly directed to the latter, rather than to the transgressor. Possibly, when people are subjected to trainings of compassion, their capacity to feel closer to the transgressor also increases, especially considering the fact that compassion training can specifically prompt core Buddhist concepts, such as the universality of pain in human experiences, as well as having a non-judgmental and tolerant attitude toward others, even if they are in somehow disagreeable to us. Studies 4 and 5 focused on testing whether this is true.

In Study 4, we developed and tested the effectiveness of two short compassion trainings, which primed two different sides of compassion. As for the previous set of studies, we drawn upon Buddhist literature, which theorizes that compassion has a dual nature (Dalai Lama, 2006). On the one side, there is compassion felt for loved and close others (i.e., compassion based o*n biology*); on the other side there is compassion based on understanding, respect, and on the similarities that people share with others (i.e., compassion based *on reason*). In our study, participants could be either exposed to a training priming compassion based on biology (i.e., Affective training), compassion based on reason (i.e., Rational-Affective training), or to an active control task. Subsequently, similarly to previous studies, they read a story describing an interpersonal transgression where a negative target was eventually found to be in a suffering state, and reported their compassionate and prosocial reactions toward him. Results proved the effectiveness of both trainings: participants assigned to the training (vs. control) conditions reported increased compassionate reactions and prosocial intentions toward the negative target. Moreover, prosocial intentions were particularly high when participants did a training priming compassion based on reason. In Study 5, we aimed at corroborating these results while taking into account additional

factors, such as (a) the valence of the target behavior (Low Valuing: negative and transgressive vs. High Valuing: positive and in line with a moral norm); (b) the collective nature of the transgression; (c) the role of dispositional compassion. As in the previous study, participants were exposed to one of the trainings or to the active control condition. Then, similarly to Studies 3a and 3b, they could either read the story of a target violating a norm of Care, or behaving in line with it. Results showed that participants assigned to the Affective training reported more compassion and prosocial intentions toward the negative target, compared to controls and to participants who did the Rational-Affective training. Moreover, the Affective training removed the difference in compassion and prosocial intentions toward the positive vs. the negative target observed in the other conditions. Arguably, the different pattern of results found in Studies 4 and 5 could be explained in light of the nature of the transgression (interpersonal vs. collective) and/or of some characteristics of the sample, which we did not take into account (e.g., experience in meditation). Finally, evidence supported the fact that effects of the trainings hold regardless of participants' levels of dispositional compassion, in line with the idea that trait- and state-like compassion have different peculiarities, with the latter being an effective tool to foster positive reactions toward the suffering of negative targets.

Overall, results of this last set of studies not only are in line with previous evidence supporting the benefits of training compassion at the interpersonal level (for a review see Skwara, 2017), they also corroborate the effectiveness of short interventions (e.g., Hutcherson et al. 2008; Leiberg et al., 2013; Navarrete et al., 2021), which have the potential to be easily administrable and largely accessible. Moreover, our results add to previous evidence regarding the effect of an induction of compassion in decreasing third-party punishment (Condon & DeSteno, 2011), by developing two structured training that are specifically tailored to promote better reactions toward a negatively perceived target. Being effective regardless of participant's level of dispositional compassion, our trainings also solve the possible downsides that people high in dispositional compassion face when exposed to transgressions harming others' well-being, highlighted in the

previous studies. Finally, our studies make a first attempt to disentangle the Buddhist dual conceptualization of compassion at the empirical level, opening up to the possibility to choose whether to foster a form of compassion which is either more emotional or rational , according to the kind of transgressive behavior people are exposed to (i.e., interpersonal vs. collective).

8.2. Limitations and future directions

The present project has some limitations that need to be acknowledge in order to envisage key future directions. First of all, we only collected self-report data, employing online surveys and explicit measures. Future studies should test whether our results replicate in laboratory setting, where the experimenter can properly monitor participants. Moreover, including behavioral tasks (e.g., choice to donate money or sign a petition) could help overcoming the limits of self-report measures and properly allow to assess prosocial behaviors, and not only intentions.

Second, participants were always exposed to the target's suffering via textual contents (i.e., fake newspaper articles). As a future direction, researchers should attempt to run studies in more ecologic settings, for instance employing confederates (e.g., Condon et al., 2013), to directly expose participants to the target's suffering. Alternatively, employing videos or virtual reality tools could also provide participants with more immersive settings, which might promote greater involvement.

Third, the suffering targets that we considered in our studies were always ingroup members (i.e., Italian people), and men. Future studies should investigate whether our results would change if participants were exposed to the suffering of targets belonging to different groups, for instance women or people with diverse ethnic backgrounds.

Finally, in our project we solely focused on reaction to physical suffering. However, as previous literature suggests (e.g., Riva & Andrighetto, 2012) there are multiple forms of pain that could be perceived differently, thus also people's reactions to them could vary. Future studies should test whether taking into account various form of pain that not necessarily involve physical illness led to different results.

8.3. Why is this research question worthy of investigation?

Taken together, results of our studies support the crucial role that compassion plays in shaping people's emotional and prosocial reactions to others' suffering. In particular, interventions able to foster compassion at the state-level seem to be useful tools to counteract people's tendency of showing poor reactions to the suffering of others, when they behave negatively (Batson et al., 2007). This is particularly relevant for several reasons and has implications at the individual and at the societal level.

At the individual level, fostering compassion might not only promote positive state-level reactions, it could also lead to stable and lasting changes in positive other-oriented individual dispositions, thereby advancing the science and practice of character and promoting individual and interpersonal well-being. As for its implications at the societal level, the fact that bystanders fail to acknowledge and react to the pain experienced by negative targets does not only apply to those who have previously transgressed or behaved badly, as negative evaluations can often derive from stereotypes (e.g., Amodio & Devine, 2006; Cuddy et al., 2008). Therefore, members of broader social categories who are stereotypically perceived as negative could be affected too, as evidence previously discussed in this thesis seems to suggest (e.g., Riva & Andrighetto, 2012; Xu et al., 2009). This could lead to increased intergroup conflict, harsh societal tensions, and to subsequent downward escalations of aggression. Fostering compassion toward everyone might have the power to spur prosocial behavior toward people and groups, thereby contributing to balancing the social system and strengthening social harmony. Quoting the Dalai Lama "The cultivation of compassion is no longer a luxury, but a necessity, if our species is to survive".

Despite the above cited positive implications, we acknowledge the fact that the aim of this project might also raise doubts and skepticisms. Indeed, one could question the need for promoting better reactions toward those who have previously transgressed, by interpreting it as a way of being indulgent toward them. However, this is not the point that we support across this thesis. Promoting better reaction toward the suffering of others, even when they behave negatively, does not entail tolerance, nor the fact that transgressors should avoid facing the consequences of their actions.

However, it also does not mean that they deserve to experience pain and suffering as a punishment. A compelling example in support of this point concerns the conditions of inmates in prison. This is a particularly relevant theme, especially in Italy –the country in which we collected data of our studies–, where the prison system often fails to guarantee adequate living conditions to inmates. Indeed, research showed that inmates experience a huge amount of suffering. Their health conditions are often severe, as shown by the larger proportion of physical and mental diseases that affect them, compared to unconfined people (e.g., Vollet et al., 2016). Moreover, reports on suicides of (Castelpietra et al., 2018) and aggressions toward (Paterniti Martello, 2021) inmates are dramatically common. Finally, prisoners are often stripped of their humanity (Bastian et al., 2013). We bring this example in support of our position because, despite inmates are already legally paying for their actions by serving a sentence, the cost of it also hugely reflects on their mental and physical well-being, due to the deficiencies of the prison care system. The fact that they behaved wrongly, should not lead to insensitivity to their conditions, as showing proper reactions in the face of suffering is a basic human right that should be granted to all.

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Appendix

CHAPTER 2

Preliminary analyses for the SOCS-O and the CS

As a first step, we checked for basic assumptions for CFA, namely normal distribution and multivariate normality. Values of skewness were all negative, ranging from -0.25 (item 11) to -1.07 (item 12) for the SOCS-O, and from -0.38 (item 2) to -1.37 (item 3) for the CS. As for kurtosis, most items showed negative values, ranging from -0.54 (item 20) to 0.42 (item 17) for the SOCS-O, and from -0.47 (item 10) to 1.46 (item 3R) for the CS.

Despite the multivariate normality assumption was rejected, Currant, West and Finch (1996) found that considerable problems arise when values of univariate skewness and kurtosis are higher than 2.0 and 7.00, respectively. In our sample, the values were below these critical thresholds.

Italian versions of the scales

Instructions SOCS-O:

"Di seguito sono riportate delle frasi che descrivono come potresti relazionarti con le altre persone. Per favore, indica quanto ritieni che, nel tuo caso, le seguenti affermazioni corrispondano al vero, usando la scala di risposta a 5 punti sotto riportata.

Nota: Nelle seguenti affermazioni, termini generici (es., 'turbato/a, 'sconvolto/a', 'scosso/a', 'angosciato/a', 'sofferenza') sono usati per indicare una gamma di emozioni negative, come la tristezza, la paura, la rabbia, la frustrazione, il senso di colpa, la vergogna, etc.
Per favore, fornisci una risposta per ognuna delle affermazioni.
La scala di risposta è: 1 = Per nulla vero; 2 = Raramente vero, 3 = A volte vero, 4 = Spesso vero, 5 = Sempre vero. Per esempio, se pensi che un'affermazione sia spesso vera per te, indica '4'."

Table A1. Italian translation and standardized loadings of the Sussex-Oxford Compassion Scale – toward others (SOCS-O)

English items	Italian items	Standardized loadings
SOCS-O 1	Mi accorgo quando le persone si sentono angosciate, senza che debbano dirmelo loro.	.84*
SOCS-O 2	Mi rendo conto che tutti soffrono a un certo punto della loro vita.	.65 *
SOCS-O 3	Quando qualcuno sta attraversando un periodo difficile, sono benevolo/a nei suoi confronti.	.74*
SOCS-O 4	Quando qualcuno è scosso, provo ad essere aperto/a ai suoi sentimenti piuttosto che evitarli.	.72*
SOCS-O 5	Quando gli altri sono in difficoltà, provo a fare qualcosa che possa essere loro di aiuto.	.78*
SOCS-O 6	Noto quando gli altri si sentono angosciati.	.86*
SOCS-O 7	Mi rendo conto che ogni tanto sentirsi sconvolti è parte della natura umana.	.70*
SOCS-O 8	Quando sento che ad altre persone è successo qualcosa di brutto, mi preoccupo per il loro benessere.	.77*
SOCS-O 9	Resto vicino/a alle persone e le ascolto quando sono sconvolte, anche se è difficile da sostenere.	.79*
SOCS-O 10	Quando qualcuno sta attraversando un periodo difficile, cerco di prendermi cura di lui/lei.	.84*
SOCS-O 11	Sono veloce a notare i primi segnali di angoscia negli altri.	.79*
SOCS-O 12	So che anche le altre persone, proprio come me, affrontano delle battaglie nella vita.	.80*
SOCS-O 13	Quando qualcuno è turbato, cerco di sintonizzarmi su come si sente.	.76*
SOCS-O 14	Mi connetto alla sofferenza degli altri senza giudicarli.	.63*

SOCS-O 15	Quando vedo qualcuno in difficoltà, provo a fare ciò che è meglio per lui/lei.	.81*
SOCS-O 16	Riconosco i segnali della sofferenza negli altri.	.81*
SOCS-O 17	So che tutti noi possiamo sentirci ogni tanto sconvolti quando ci viene fatto del male.	.83*
SOCS-O 18	Sono sensibile all'angoscia altrui.	.72*
SOCS-O 19	Quando le altre persone sono sconvolte, posso esserci per loro, senza sentirmi sopraffatto/a dalla loro angoscia.	.40*
SOCS-O 20	Quando vedo che qualcuno è turbato, faccio del mio meglio per prendermi cura di lui/lei.	.82*

Note. * $p < .001$; second-order loadings were .66 for Recognizing, .69 for Understanding; .999 for Feeling; .99 for Tolerating; .92 for Acting, all significant at $p < .001$.

Instructions CS:

"Per favore, leggi attentamente ognuna delle seguenti affermazioni prima di rispondere. Alla sinistra di ogni affermazione indica quanto spesso ti senti o ti comporti nel modo indicato.
La scala di risposta va da 1 = Quasi mai a 5 = Quasi sempre"

Table A2. Italian translation and standardized loadings of the Compassion Scale (CS)

English items	Italian items	Standardized loadings
CS 1	Presto molta attenzione quando le altre persone mi parlano dei loro problemi.	.87*
CS 2	Se vedo qualcuno che sta attraversando un periodo difficile, provo a prendermi cura di quella persona.	.91*
CS 3 R	Sono indifferente ai problemi delle altre persone. (R)	.87*
CS 4	Mi rendo conto che a volte tutti si possano sentire giù, è parte dell'essere umani.	.88*
CS 5	Mi accorgo quando le persone sono turbate, anche se non dicono nulla.	.62*
CS 6	Mi piace essere presente per gli altri nei momenti di difficoltà.	.87*
CS 7 R	Penso poco alle preoccupazioni altrui. (R)	.69*
CS 8	Sento che è importante riconoscere che tutte le persone hanno delle debolezze e che nessuno è perfetto.	.88*
CS 9	Ascolto pazientemente quando le persone mi parlano dei loro problemi.	.80*
CS 10	Il mio cuore è vicino alle persone che sono infelici.	.76*
CS 11 R	Cerco di evitare le persone che stanno provando molto dolore. (R)	.64*

CS 12	Penso che la sofferenza sia semplicemente una parte della comune esperienza umana.	.64*
CS 13	Quando le persone mi parlano dei loro problemi cerco di mantenere una prospettiva bilanciata della situazione.	.48*
CS 14	Quando gli altri si sentono tristi, cerco di confortarli.	.83*
CS 15 R	Non riesco ad entrare davvero in connessione con le altre persone quando stanno soffrendo. (R)	.69*
CS 16	Nonostante io sia diverso dagli altri, so che chiunque prova dolore proprio come me.	.73*

Note. * $p < .001$; second-order loadings were .91 for Kindness, .66 for Common Humanity; .96 for Mindfulness; .45 for Indifference, all significant at $p < .001$.

Network Analyses

Table A3. Edge weights matrix for the SOCS-O and CS network reported in Figure 1

	SOCS_O.R	SOCS_O.U	SOCS_O.F	SOCS_O.T	SOCS_O.A	CS.K	CS.CH	CS.M	CS.I
SOCS_O.R	0.0000000	0.2408736	0.24531976	0.0000000	0.00000000	-0.1221229	-0.16340563	0.3324912	0.00000000
SOCS_O.U	0.2408736	0.0000000	0.15013127	0.1265791	0.00000000	-0.1018299	0.58616962	0.0000000	0.00000000
SOCS_O.F	0.2453198	0.1501313	0.00000000	0.2278320	0.34649437	0.2164583	0.00000000	0.0000000	0.07389507
SOCS_O.T	0.0000000	0.1265791	0.22783204	0.0000000	0.31344465	0.0000000	0.00000000	0.1125263	0.00000000
SOCS_O.A	0.0000000	0.0000000	0.34649437	0.3134446	0.00000000	0.3824321	-0.08024765	0.0000000	0.00000000
CS.K	-0.1221229	-0.1018299	0.21645832	0.0000000	0.38243207	0.0000000	0.11732010	0.3565987	0.19950092
CS.CH	-0.1634056	0.5861696	0.00000000	0.0000000	-0.08024765	0.1173201	0.00000000	0.2783994	0.00000000
CS.M	0.3324912	0.0000000	0.00000000	0.1125263	0.00000000	0.3565987	0.27839942	0.0000000	0.00000000
CS.I	0.0000000	0.0000000	0.07389507	0.0000000	0.00000000	0.1995009	0.00000000	0.0000000	0.00000000

Table A4. Centrality measures calculated for each node of the SOCS-O and the CS

	Strength	Betweenness	Closeness	Expected Influence
SOCS_O.R	0.12	-0.71	0.24	-1.05
SOCS_O.U	0.41	-0.10	-0.51	0.49
SOCS_O.F	0.57	-0.10	0.45	1.33
SOCS_O.T	-0.80	-1.02	-0.74	-0.24
SOCS_O.A	0.18	-0.10	0.51	0.36
CS.K	1.24	2.03	1.44	0.64
CS.CH	0.47	-0.10	-0.48	-0.38
CS.M	0.05	1.12	0.94	0.74
CS.I	-2.25	-1.02	-1.87	-1.90

Note. SOCS_O.R is SOCS-O Recognizing; SOCS_O.U is SOCS-O Universality; SOCS_O.F is SOCS-O Feeling; SOCS_O.T is SOCS-O Tolerating; SOCS_O.A is SOCS-O Acting. CS.K is CS Kindness; CS.CH is CS Common Humanity; CS.M is CS Mindfulness; CS.I is CS Indifference reverse-coded (lack of indifference).

Stability of the compassion network

We tested edge-weight accuracy and stability of centrality indexes with bootstrapping (2,500 samples; case-dropping for centrality stability), and reported them respectively in Figure A1 and Figure A2 (below). As edge weights had narrow, non-overlapping 95% bootstrapped CI, especially for weights above 0.20, they proved to be accurate. Similarly, centrality indexes were stable: the CS-coefficient, which quantifies the maximum proportion of cases that can be dropped to retain with 95 % certainty a correlation with the original centrality of higher than 0.7, was 0.75 for strength and expected influence, 0.67 for closeness, and 0.60 for betweenness (threshold: 0.50; Epskamp et al., 2018).

Figure A1. Accuracy of edge weights of the network of facets of SOCS-O and CS

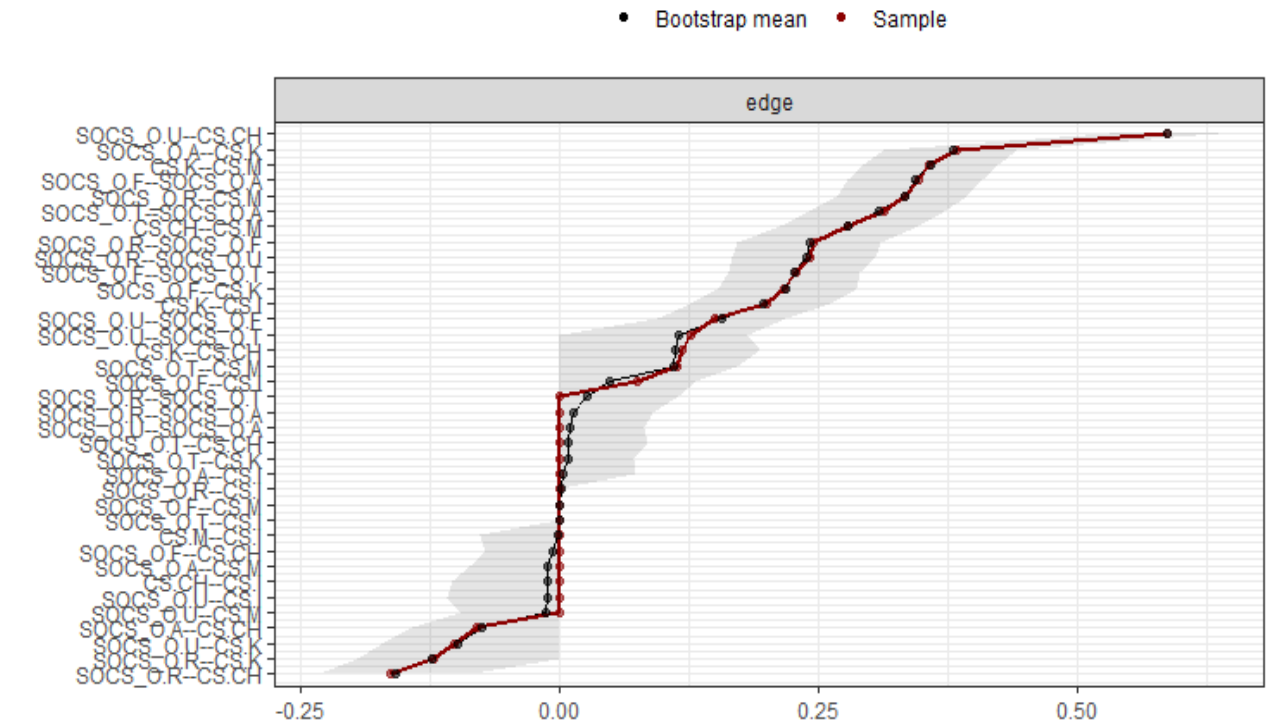
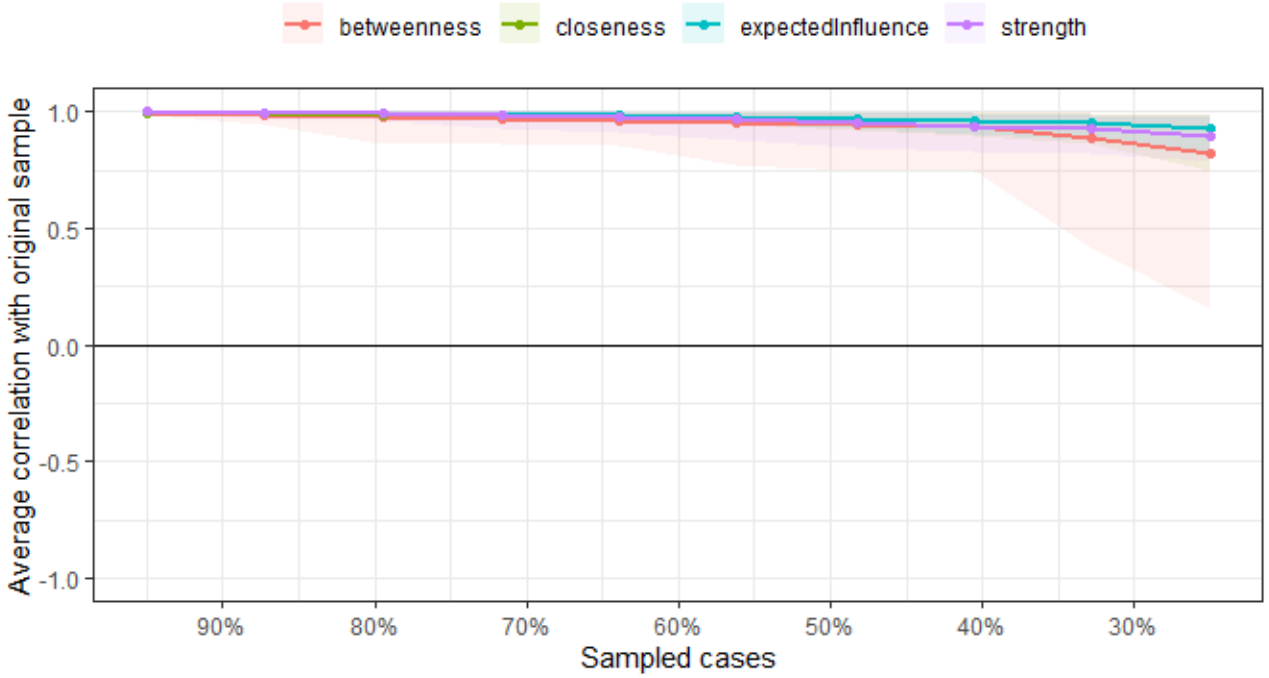


Figure A2. Stability of centrality measures of the network of facets of SOCS-O and CS



Relationships between the facets of the SOCS-O and the CS and the correlates

To better understand the correlation patterns reported in Table 6, we performed correlation analyses between the facets of dispositional compassion and the same list of variables (Table A5). This exploratory analysis allowed us to see when the relationships between the specific facets of SOCS-O and CS and the correlates were consistent – or inconsistent – with the correlation patterns of the total scores of the scales.

In general, most facets showed correlation patterns consistent with the total compassion score. When the correlates had no statistically significant relationship with the total compassion score, most facets followed the same pattern, but sometimes one of the facets had weak correlations with those correlates. This was the case for the positive correlations between SOCS-O Recognizing and positive affect, the positive correlations that SOCS-O Universality had with perceived stress and self-compassion, and the negative correlation between SOCS-O Tolerating and personal distress. For what concerns the CS, Indifference was negatively correlated with personal distress, self-deceptive enhancement, psychological entitlement, and emotional suppression, whereas Common Humanity was positively related to self-compassion and difficulties in emotion regulation; such correlates were unrelated to the total score of the CS.

SOCS-O Recognizing, Feeling, Tolerating, and Acting were often related to the same constructs, whereas Universality had sometimes different correlation patterns, as shown by the abovementioned correlations and by its missing link with social connectedness and mindfulness. As for the CS, Kindness frequently showed stronger correlations compared to the other facets, and correlation patterns similar to those of Common Humanity and Mindfulness. As outlined above, Indifference showed some specific patterns, and unlike the other CS facets, it was unrelated to search for meaning in life, to reappraisal strategies, secure and anxious attachment.

We can compare our correlations of SOCS-O facets with those found by Gu et al. (2020); the validation of the CS (Pommier et al., 2020) did not include subscales' correlations. Consistent with Gu et al. (2020), all SOCS-O facets were positively related to empathic concern and

perspective taking, and – except for Universality – to dispositional mindfulness. Compared to Gu et al. (2020), in our analysis SOCS-O facets showed less correlations: Tolerating was negatively related to personal distress, and Universality was positively correlated with self-compassion.

Summarizing, all facets of the CS and the SOCS-O were associated with other-oriented dispositions, corroborating the idea that compassion has multiple benefits at the interpersonal level. Interestingly, all SOCS-O facets were also related to negative affect, supporting the idea that the SOCS-O is a measure that captures the suffering associated with feeling compassion for others. As for the CS facets, Kindness had stronger correlations, whereas Indifference showed some specific patterns; these findings support network analysis results, which identified Kindness as one of the core components of compassion, and Indifference as a distal, almost independent, element of compassion. It is interesting to notice that the two facets representing the (emotional) core of compassion in the network analyses, namely CS Kindness and SOCS-O Feeling, also showed similar associations with the correlates, suggesting a certain level of consistency between them, despite them capturing different nuances of the construct of compassion. Except for a couple of correlation coefficients, also the correlational patterns of SOCS-O Acting and Tolerating were similar to those of CS Kindness and SOCS-O Feeling, suggesting a common underlying ground for the four dimensions. For what concerns Indifference, its correlation patterns were sometimes different from those involving the other CS factors. This is in line with previous evidence on self-compassion, showing that factors assessing uncompassionate self-responding, compared to factors assessing compassionate self-responding, correlate differently with a range of external measures (e.g., Muris et al., 2018).

Table A5. Relationships between the SOCS-O and CS subscales and the correlates

Scales	Samples	SOCS_O.R	SOCS_O.U	SOCS_O.F	SOCS_O.T	SOCS_O.A	CS.K	CS.CH	CS.M	CS.I
Other-oriented dispositions										
Social connectedness	A	.24***	.08	.21**	.21**	.24***	.33***	.14*	.28***	.34***
Prosociality	B	.34***	.32***	.56***	.51***	.60***	.68***	.31***	.46***	.51***
Benevolence	B	.14*	.23***	.36***	.33***	.42***	.49***	.30***	.27***	.37***
Universalism	B	.15*	.24***	.35***	.29***	.30***	.45***	.28***	.29***	.22***
IRI: Empathic concern	C	.33***	.24***	.58***	.41***	.51***	.58***	.29***	.43***	.48***
IRI: Perspective taking	C	.34***	.28***	.49***	.46***	.42***	.47***	.45***	.54***	.28***
IRI: Personal distress	C	-.03	-.01	.05	-.17**	-.03	.02	-.03	-.06	-.16**
Well-being dimensions										
PANAS: Positive affect	A	.16*	.03	.03	.09	.02	.09	.22**	.21**	.04
PANAS: Negative affect	A	.27***	.26***	.23***	.14*	.16**	.17**	.09	.15**	.03
Perceived Stress	C	-.01	.13*	.04	-.07	-.03	.06	.05	-.02	-.05
MLQ: Presence	C	.19**	.15*	.22***	.26***	.27***	.24***	.15*	.22***	.11
MLQ: Search	C	.29***	.30***	.33***	.32***	.32***	.29***	.28***	.25***	.10
Mindfulness										
FFMQ: Total score	C	.18**	.05	.19**	.22***	.19**	.15*	.11	.17**	.29***
Dispositions related to compassion										
Self-Compassion	B	.11	.14*	-.05	.10	-.04	-.11	.13*	.05	-.05
Fear of compassion for others	C	-.06	.01	-.23***	-.13*	-.17**	-.18**	-.04	-.11	-.42***
Social desirability										
BIDR: Self-deceptive enhancement	B	.27***	.17**	.04	.21**	.11	-.02	.08	.11	-.15*

BIDR: Impression management	B	.07	-.03	.08	.03	-.02	.01	-.06	.05	.11
Individual characteristics related to self-evaluation										
Self-Esteem	C	.20**	-.01	.14*	.17**	.20**	.17**	.13*	.20**	.19**
Labile self-esteem	C	.01	.08	.01	-.09	-.04	-.00	-.06	-.12	-.09
Psychological entitlement	C	.01	-.00	-.09	.01	-.00	.03	-.01	-.05	-.20**
Emotion regulation										
Difficulties in Emotion Regulation	A	.10	.25***	.17*	.05	.10	.09	.14*	.07	-.09
ERQ: Reappraisal	C	.25***	.22**	.17*	.23***	.24***	.19**	.28***	.27***	.06
ERQ: Suppression	C	.02	.06	-.03	.05	-.02	-.04	.07	.02	-.21***
Attachment styles										
ASQ: Secure Attachment	A	.31***	.16*	.28***	.24***	.24***	.27***	.27***	.31***	.06
ASQ: Avoidant Attachment	A	-.05	.02	-.05	-.12	-.09	-.14*	.04	-.06	-.32***
ASQ: Anxious Attachment	A	.16*	.20**	.30***	.06	.21**	.27***	.13*	.17*	-.01

Note. SOCS_O.R is SOCS-O Recognizing; SOCS_O.U is SOCS-O Universality; SOCS_O.F is SOCS-O Feeling; SOCS_O.T is SOCS-O Tolerating; SOCS_O.A is SOCS-O Acting. CS.K is CS Kindness; CS.CH is CS Common Humanity; CS.M is CS Mindfulness; CS.I is CS Indifference reverse-coded (lack of indifference).

References – Appendix Chapter 2

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Appendix

CHAPTER 4

Low Valuing Condition

"Grave incidente per runner nel quartiere Forcellini"

Si chiama Luigi Schiavon l'uomo che il giorno 22 marzo 2020 ha avuto un grave incidente in via Francesco Maria Colle a Padova, nel quartiere Forcellini. Schiavon, 35enne in buona salute e sportivo allenato, è stato investito da un'autovettura mentre attraversava l'incrocio con via Forcellini. Come documentato da una signora che ha assistito all'accaduto dal balcone della propria casa, l'uomo è stato investito da una Fiat Doblò di colore nero, proprio mentre faceva jogging. Salvifici sono stati i soccorsi che sono stati chiamati tempestivamente dalla signora in questione, che ha prontamente chiamato il 118. L'impatto con l'autovettura ha causato a Schiavon gravi lesioni, in particolare si è resa necessaria l'ingessatura della gamba sinistra per una frattura della tibia, ma fortunatamente l'uomo non è in pericolo di vita. Dalle prime rilevazioni delle forze dell'ordine giunte sul luogo dell'incidente, è emerso che il runner era lontano da casa ben oltre i 200 mt di distanza consentiti dall'ordinanza della Regione del Veneto nell'ambito dell'emergenza Coronavirus. L'uomo si trovava, infatti, a 2,5 km dalla propria abitazione. Da rilevazioni più approfondite è emerso che l'uomo si recava stava recando presso verso l'argine nelle vicinanze per continuare lo svolgimento di attività sportiva, come faceva spesso in questo periodo.

A distanza di qualche giorno dall'incidente l'uomo ha deciso di sfogarsi pubblicamente con un post su Facebook. In merito all'accaduto e alle lesioni subite ha dichiarato: "Da quando ho avuto l'incidente ho dolori continui, che non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento dell'impatto. So di essere fortunato ad essere vivo, ma ora mi sento come svuotato e paralizzato dalla paura. Non so quando questa sofferenza finirà"

High Valuing condition

“Grave incidente per cittadino volontario medico nel quartiere Forcellini”

Si chiama Luigi Schiavon l'uomo che il giorno 22 marzo 2020 ha avuto un grave incidente in via Francesco Maria Colle a Padova, nel quartiere Forcellini. Schiavon, 35enne in buona salute e sportivo allenato, è stato investito da un’autovettura mentre attraversava l’incrocio con via Forcellini. Come documentato da una signora che ha assistito all’accaduto dal balcone della propria casa, l’uomo si è stato investito da una Fiat Doblò di colore nero mentre camminava con in mano diverse buste della spesa. Salvifici sono stati i soccorsi che sono stati chiamati tempestivamente dalla signora in questione, che ha prontamente chiamato il 118. L’impatto con l’autovettura ha causato a Schiavon gravi lesioni, in particolare si è resa necessaria l’ingessatura della gamba sinistra per una frattura della tibia, ma fortunatamente l’uomo non è in pericolo di vita.

Dalle prime rilevazioni delle forze dell'ordine giunte sul luogo dell’incidente, è emerso che il medico era lontano da casa ben oltre i 200 mt di distanza consentiti dall’ordinanza della Regione del Veneto nell'ambito dell'emergenza Coronavirus. Si trovava, infatti, a 2,5 km dalla propria abitazione. Da rilevazioni più approfondite è emerso che l’uomo si recava stava recando a consegnare la spesa a casa di alcune persone anziane del quartiere, attività di volontariato che faceva spesso in questo periodo. A distanza di qualche giorno dall'incidente l’uomo ha deciso di sfogarsi pubblicamente con un post su Facebook. In merito all’accaduto e alle lesioni subite ha dichiarato: “Da quando ho avuto l’incidente ho dolori continui, che non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento dell’impatto. So di essere fortunato ad essere vivo, ma ora mi sento come svuotato e paralizzato dalla paura. Non so quando questa sofferenza finirà”

Control condition

“Grave incidente per cittadino volontario medico nel quartiere Forcellini”

Si chiama Luigi Schiavon l'uomo che il giorno 22 marzo 2020 ha avuto un grave incidente in via Francesco Maria Colle a Padova, nel quartiere Forcellini. Schiavon, 35enne in buona salute e sportivo allenato, è stato investito da un’autovettura mentre attraversava l’incrocio con via Forcellini. Come documentato da una signora che ha assistito all’accaduto dal balcone della propria casa, l’uomo si è stato investito da una Fiat Doblò di colore nero mentre camminava con in mano diverse buste della spesa. Salvifici sono stati i soccorsi che sono stati chiamati tempestivamente dalla signora in questione, che ha prontamente chiamato il 118. L’impatto con l’autovettura ha causato a Schiavon gravi lesioni, in particolare si è resa necessaria l’ingessatura della gamba sinistra per una frattura della tibia, ma fortunatamente l’uomo non è in pericolo di vita.

Dalle prime rilevazioni delle forze dell'ordine giunte sul luogo dell’incidente, è emerso che il medico era lontano da casa ben oltre i 200 mt di distanza consentiti dall’ordinanza della Regione del Veneto nell'ambito dell'emergenza Coronavirus. Si trovava, infatti, a 2,5 km dalla propria abitazione. Si attendono ancora notizie delle rilevazioni più approfondite effettuate dalle forze dell’ordine sui motivi per cui l’uomo si era allontanato da casa. A distanza di qualche giorno dall'incidente l’uomo ha deciso di sfogarsi pubblicamente con un post su Facebook. In merito all’accaduto e alle lesioni subite ha dichiarato: “Da quando ho avuto l’incidente ho dolori continui, che non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento dell’impatto. So di essere fortunato ad essere vivo, ma ora mi sento come svuotato e paralizzato dalla paura. Non so quando questa sofferenza finirà”

Appendix

CHAPTER 5

Low Valuing Care Condition

"Manerbio, imprenditore coinvolto in grave incidente nell'edilizia. L'uomo si occupa della costruzione di una sala slot, che stava sorgendo al posto dell'edificio che ospitava la cooperativa sociale "CooperiAMO"."

Manerbio (BS), ennesimo incidente in cantiere dall'inizio dell'anno. Ad essere coinvolto stavolta è l'imprenditore Valerio Bertoldo, committente dell'opera. L'uomo, titolare di una ditta di costruzioni, stava visitando il cantiere quando alcune travi hanno improvvisamente ceduto, colpendolo in pieno. Bertoldo è rimasto sotto le macerie per un paio d'ore prima che i soccorsi riuscissero a tirarlo fuori. L'uomo si occupava di coordinare la costruzione di una sala slot. La sala slot sta sorgendo al posto dell'edificio che ospitava la cooperativa sociale "CooperiAMO", storico punto di riferimento per i cittadini manerbiesi. La cooperativa, impiegata in diverse attività di supporto per la comunità svolte a titolo gratuito (assistenza agli anziani, doposcuola per bambini, orientamento scolastico-professionale per adolescenti), andava verso la chiusura per via delle difficoltà economiche, quando Bertoldo ha colto la palla al balzo, convincendo il comune di Manerbio a fargli rilevare l'area.

L'incidente ha causato a Bertoldo gravi lesioni, tra cui un trauma cranico, la lussazione della spalla e la frattura del femore. Attualmente ricoverato, in merito a quanto accaduto Bertoldo ha dichiarato "Da quando ho avuto l'incidente i dolori non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento del crollo. Non so quando questa sofferenza finirà".

High Valuing Care Condition

“Manerbio, imprenditore coinvolto in grave incidente nell’edilizia. L’uomo si occupa della ristrutturazione pro bono dell’edificio che ospitava la cooperativa sociale “CooperiAMO”.”

Manerbio (BS), ennesimo incidente in cantiere dall’inizio dell’anno. Ad essere coinvolto stavolta è l’imprenditore Valerio Bertoldo, committente dell’opera. L’uomo, titolare di una ditta di costruzioni, stava visitando il cantiere quando alcune travi hanno improvvisamente ceduto, colpendolo in pieno. Bertoldo è rimasto sotto le macerie per un paio d’ore prima che i soccorsi riuscissero a tirarlo fuori. L’uomo si occupava di coordinare la ristrutturazione dell’edificio che ospita la cooperativa sociale “CooperiAMO”, storico punto di riferimento per i cittadini manerbiesi. La cooperativa, impiegata in diverse attività di supporto per la comunità svolte a titolo gratuito (assistenza agli anziani, doposcuola per bambini, orientamento scolastico-professionale per adolescenti), andava verso la chiusura per via delle difficoltà economiche. Quando Bertoldo è venuto a conoscenza della situazione, ha contattato il comune di Manerbio e si è offerto di effettuare una ristrutturazione pro-bono, a spese della sua ditta.

L’incidente ha causato a Bertoldo gravi lesioni, tra cui un trauma cranico, la lussazione della spalla e la frattura del femore. Attualmente ricoverato, in merito a quanto accaduto Bertoldo ha dichiarato “Da quando ho avuto l’incidente i dolori non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento del crollo. Non so quando questa sofferenza finirà”.

Low Valuing Fairness Condition

“Manerbio, imprenditore coinvolto in grave incidente nell’edilizia. A seguito dell’incidente l’uomo è stato inquisito: scoperto giro di favoritismi.”

Manerbio (BS), ennesimo incidente in cantiere dall’inizio dell’anno. Ad essere coinvolto stavolta è l’imprenditore Valerio Bertoldo, committente dell’opera. L’uomo, titolare di una ditta di costruzioni, stava visitando il cantiere quando alcune travi hanno improvvisamente ceduto, colpendolo in pieno. Bertoldo è rimasto sotto le macerie per un paio d’ore prima che i soccorsi riuscissero a tirarlo fuori. L’uomo si occupava di coordinare la costruzione di un nuovo parcheggio coperto. A seguito dell’incidente è stata anche aperta un’inchiesta sulla società di Bertoldo, che ha smascherato un’alterazione nella gara di appalto per il parcheggio. Secondo gli inquirenti, Bertoldo avrebbe cercato e ottenuto un favoritismo per aggiudicarsi l’appalto in questione, a scapito delle altre ditte che concorrevano.

L’incidente ha causato a Bertoldo gravi lesioni, tra cui un trauma cranico, la lussazione della spalla e la frattura del femore. Attualmente ricoverato, in merito a quanto accaduto Bertoldo ha dichiarato “Da quando ho avuto l’incidente i dolori non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento del crollo. Non so quando questa sofferenza finirà”.

High Valuing Fairness Condition

“Manerbio, imprenditore coinvolto in grave incidente nell’edilizia. L’uomo è uno dei maggiori promotori della legalità in ambito edilizio.”

Manerbio, ennesimo incidente sul lavoro dall’inizio dell’anno. Ad essere coinvolto stavolta è l’imprenditore Valerio Bertoldo, committente dell’opera. L’uomo, titolare di una ditta di costruzioni, stava visitando il cantiere quando alcune travi hanno improvvisamente ceduto, colpendolo in pieno. Bertoldo è rimasto sotto le macerie per un paio d’ore prima che i soccorsi riuscissero a tirarlo fuori. L’uomo si occupava di coordinare la costruzione di un nuovo parcheggio coperto. A seguito dell’incidente, è stata anche aperta un’inchiesta sulla società di Bertoldo, che non ha indentificato alcuna irregolarità. Bertoldo infatti, è conosciuto sul territorio per essere uno tra i maggiori promotori della legalità in ambito edilizio, tanto che in passato ha anche denunciato un giro di favoritismi e corruzione di cui si era trovato testimone.

L’incidente ha causato a Bertoldo gravi lesioni, tra cui un trauma cranico, la lussazione della spalla e la frattura del femore. Attualmente ricoverato, in merito a quanto accaduto Bertoldo ha dichiarato “Da quando ho avuto l’incidente i dolori non mi danno tregua, fatico a dormire la notte e rivivo continuamente il momento del crollo. Non so quando questa sofferenza finirà”.

Appendix

CHAPTER 7

Affective Training Condition

Caro partecipante o cara partecipante, chiudi gli occhi.

Quando ti senti pronto, cerca di richiamare alla mente tre persone per cui nutri un profondo affetto e amore. Queste tre persone possono essere un familiare, un amico o un'amica, la persona che ami o qualsiasi altra persona a cui vuoi veramente bene. Tieni bene a mente le tre persone che hai scelto e prova a visualizzarle di fronte a te.

Continuando a tenere gli occhi chiusi, respira profondamente, cercando di focalizzarti sui sentimenti positivi che provi per le tre persone da te scelte. Focalizzati sull'amore, la gioia e la gratitudine che queste persone ti trasmettono o ti hanno trasmesso in un determinato momento della tua vita. Lascia le tue emozioni fluire e permetti a te stesso di esplorare la profondità di tali sentimenti positivi. Chi sono queste persone per te? Questi sentimenti cosa ti fanno provare nei loro confronti? Inspirando ed espirando dedica qualche secondo in più ad esplorare la profondità di questi sentimenti.

Avendo esplorato i tuoi sentimenti positivi per loro, tieni a mente la prima, la seconda e la terza persona che hai scelto. Continua a visualizzarle davanti a te, adottando una prospettiva più profonda. Loro hanno sperimentato delle sofferenze nel corso della loro vita. Continua a focalizzarti sul fatto che le tre persone che stai visualizzando davanti a te hanno sperimentato delle sofferenze, magari stanno affrontando o hanno affrontato un momento difficile della loro vita. Potrebbero aver sperimentato perdite, fallimenti, difficoltà a gestire le loro emozioni. Prova ad entrare in contatto con il loro dolore e la loro sofferenza. Riesci a sentirla. Dedica qualche secondo a focalizzarti sulla loro sofferenza. Esplora a fondo le emozioni che ti suscita l'idea che queste tre persone abbiano sofferto o possano soffrire.

Avendo percepito lo stato di sofferenza delle tre persone che stai visualizzando, immagina di relazionarti a queste tre persone con un profondo senso di affetto, immedesimandoti profondamente

con loro. Come si saranno sentite in quella situazione? Quanto forte e profondo sarà stato il loro dolore? Quali pensieri avranno avuto in quel momento?

Adesso pensa a come sarebbe bello se queste tre persone fossero libere dalla sofferenza. Immagina quindi di poter fare qualcosa per loro, affinché questo avvenga. Se te la senti, prova a pensare anche al tuo tono di voce e al genere di cose che diresti, che faresti o che vorresti fare per aiutare le persone di fronte a te. Inspirando ed espirando auguragli di non soffrire. Estendi quindi questo sentimento verso tutti gli esseri umani, concentrandoti sul tuo desiderio di aiuto. Ascolta questa tua sensazione di espansione.

Ora fai un bel respiro profondo e prenditi un momento per osservare qualunque emozione o sensazione tu stia provando. Non c'è nessun giusto o sbagliato. Limitati ad osservare come ti senti. Quando sei pronto riapri lentamente gli occhi e procedi con il resto del questionario.

Rational-Affective Training Condition

Caro partecipante o cara partecipante, chiudi gli occhi.

Quando ti senti pronto cerca di richiamare alla mente tre persone: la prima è una persona per cui provi un profondo affetto e amore, magari un tuo familiare, un amico o un'amica, la persona che ami o qualsiasi altra persona a cui vuoi veramente bene; la seconda è, invece, una persona che non conosci, che non ti trasmette né sentimenti positivi né negativi, può essere qualcuno che ti è capitato di incontrare di sfuggita durante le tue giornate, ad esempio un compagno di corso, un collega di lavoro che hai sempre visto ma con cui non hai mai avuto occasione di parlare; ora, invece, pensa ad una terza persona che non ti piace, per cui provi dei sentimenti negativi, ad esempio qualcuno che ritieni fastidioso o per cui provi rancore. Tieni bene a mente le tre persone che hai scelto e prova a visualizzarle di fronte a te.

Continuando a tenere gli occhi chiusi, respira profondamente, cercando di abbandonare le categorie in cui classifichi le tre persone da te scelte. Rifletti sul fatto che le categorie in cui classifichi queste tre persone sono solo un artefatto della tua mente. Proprio perché esistono solo nella tua mente, le categorie in cui hai classificato queste tre persone, in realtà, non le definiscono davvero. Pensa che queste categorie dipendono da quello che queste persone hanno fatto o fanno per noi. Infatti, se si comportassero in modo diverso, il nostro atteggiamento probabilmente cambierebbe. Distaccati quindi dal giudizio che solitamente associ a queste persone nella tua mente. Inspirando ed espirando, nota come, distaccandoti dai giudizi e dalle categorie, le differenze che percepisci di avere con queste tre persone siano sempre più superficiali e meno marcate, fino a sparire.

Avendo abbandonato i tuoi giudizi, continua a visualizzare le tre persone, adottando una prospettiva più profonda. Proprio come te e come tutti gli esseri umani, queste persone hanno sperimentato delle sofferenze nel corso della loro vita. Ora focalizzati sulle similitudini con le tre persone che stai visualizzando davanti a te. Loro, come te e come tutti gli esseri umani, hanno sofferto. Riesci a sentire delle similitudini tra te e loro. Rifletti sul fatto che queste persone, proprio come può succedere a te e a tutti gli esseri umani, probabilmente non riescono ad evitare la sofferenza e a

raggiungere la felicità, perché a volte agiscono mosse da confusione e non riescono a pensare chiaramente. L'assenza di consapevolezza e lucidità, infatti, può portarle anche a sbagliare. Avendo compreso che tutti gli esseri umani, incluso te stesso e le persone che stai visualizzando, cercano di liberarsi dalla sofferenza e di essere felici, immagina di relazionarti a queste tre persone con un profondo senso di affetto, immedesimandoti profondamente con loro. Come si saranno sentite in quella situazione? Quanto forte e profondo sarà stato il loro dolore? Quali pensieri avranno avuto in quel momento? Adesso pensa a come sarebbe bello se queste tre persone fossero libere dalla sofferenza. Immagina, quindi, di poter fare qualcosa per loro, affinché questo avvenga. Se te la senti, prova a pensare anche al tuo tono di voce e al genere di cose che diresti, che faresti o che vorresti fare per aiutare le persone di fronte a te. Inspirando ed espirando auguragli di non soffrire e segni quindi questo sentimento verso tutti gli esseri umani, concentrandoti sul tuo desiderio di aiuto. Ascolta questa tua sensazione di espansione.

Ora fai un bel respiro profondo e prenditi un momento per osservare qualunque emozione o sensazione tu stia provando. Non c'è nessun giusto o sbagliato. Limitati ad osservare come ti senti. Quando sei pronto riapri lentamente gli occhi e procedi con il resto del questionario.

Control Condition

Caro partecipante o cara partecipante, chiudi gli occhi.

Quando ti senti pronto, immagina tre persone che non conosci bene o che comunque hai visto poche volte, per cui non provi né sentimenti positivi né negativi. Con gli occhi chiusi, focalizzati sui volti delle tre persone che stai visualizzando. Per prima cosa concentrati sugli attributi principali: parti dal colore dei capelli e degli occhi, dalla forma del naso e della bocca. Svolgi questo esercizio per ciascuna delle tre persone che stai visualizzando, fino a quando non ti saranno date altre istruzioni.

Avendo esplorato le fattezze principali di ciascuna delle tre persone che stai visualizzando, adesso cerca di focalizzarti più nel dettaglio sulle caratteristiche più sottili del loro viso: parti dalla fronte fino ad arrivare al mento. Anche stavolta non avere fretta, passa in rassegna ogni dettaglio che ti viene in mente. Ti diremo noi quando procedere con l'esercizio.

Ora prova a fare lo stesso con le loro caratteristiche corporee: cerca di visualizzare più chiaramente possibile l'aspetto di ciascuna di queste tre persone, partendo dal collo fino ad arrivare ai piedi.

Ancora una volta prenditi il tempo necessario per svolgere questo esercizio, per ciascuna delle tre persone che stai visualizzando, fin quando non ti sarà detto di procedere.

Avendo visualizzato nel dettaglio le caratteristiche facciali e corporee di queste tre persone, adesso sposta il focus sul loro abbigliamento: cerca di visualizzare con precisione cosa stanno indossando le tre persone che stai visualizzando, immagina anche i più minimi dettagli, dalla trama del tessuto dei vestiti che indossano, fino al colore dei calzini. Parti dalla testa per poi arrivare ai piedi.

Nuovamente, prenditi il giusto tempo per esaminare ogni particolare.

Adesso prova a svuotare la mente. Puoi aiutarti pensando a qualcosa di semplice che non ti richieda impegno. Prenditi qualche minuto per rilassarti, senti la tua mente libera da ogni pensiero. Ci sei solo tu ora, niente e nessuno ti possono disturbare.

Quando te la senti, lentamente, inizia ad aprire gli occhi e procedi con la compilazione del questionario.

Interpersonal transgression

“Schianto a Manerbio, motociclista in gravi condizioni. Scontro tra una moto e un’auto, coinvolti due cittadini manerbiesi. Il motociclista è ricoverato in prognosi riservata.”

Grave incidente stradale a Manerbio (BS). Lo schianto è avvenuto sulla laterale di via Giuseppe Mazzini alle 10.30 di venerdì 4 Settembre, Operato d’urgenza il motociclista manerbiese Valerio Bertoldo dopo un tremendo impatto contro un’autovettura. Le sue condizioni sono gravi ma stabili. L’uomo alla guida dell’auto ne esce illeso. I primi soccorritori giunti in zona si sono trovati di fronte una scena impressionante: la motocicletta distrutta e scaraventata in mezzo alla strada.

Da un primo riscontro risulta che Bertoldo viaggiasse oltre il limite di velocità consentito e si sarebbe immesso nella circolazione senza accorgersi della vettura in arrivo. L’impatto è stato devastante, il conducente della moto è stato disarcionato dal suo veicolo e catapultato a 6 metri di distanza urtando violentemente l’asfalto. Tempestivi i soccorsi, Bertoldo è stato elitrasportato all’ospedale di Brescia dal personale del Summ 118. Da lì a pochi minuti la decisione dell’equipe medica di operare, intervento andato a buon fine. Il paziente è in prognosi riservata, saranno decisivi i prossimi giorni per valutare i margini e le tempistiche di recupero. Come da prassi sono stati richiesti gli accertamenti clinici sui due conducenti per valutarne lo stato psicofisico al momento dell’impatto.

Alcuni testimoni sostengono che la velocità eccessiva della corsa di Valerio Bertoldo fosse motivata da un tentativo di fuga. L’uomo avrebbe avuto un acceso contenzioso con una signora pochi minuti prima dell’incidente, Il litigio sarebbe sfociato in violenza, Bertoldo avrebbe spinto la signora a terra per poi fuggire a bordo della sua moto. I testimoni affermano che la donna stava facendo la spesa al mercato nei pressi di via Giuseppe Mazzini quando è scoppiata la lite. Bertoldo non si è ancora pronunciato in merito alle accuse. Nei giorni successivi all’incidente l’uomo è stato intervistato dai nostri inviati, si è dichiarato felice di essere ancora vivo, e ha aggiunto “L’impatto è stato spaventoso, sono ancora sotto shock. Provo dolore in tutto il corpo, questa sofferenza è terribile”.

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