

Chapter 1

General Introduction

“Our lives are not merely affected by, but structured upon, the need to be “better than.” We seem to have reached a point where [...] educating our children [...] [has] to take place in the context of a struggle where some must lose.”

(Alfie Kohn, 1992, p.3)

Across the world, we offer children many opportunities for making downward social comparisons (i.e., comparing oneself favorably to others; Festinger, 1954; Kohn, 1992). TV shows, sports tournaments, and contests award children who outperform others. Schools select and publicly announce the “best student” in school (Deci et al., 2001). Parents and teachers praise children for outperforming others (Kohn, 1992). These practices are well-intentioned: By offering opportunities for such social comparisons (comparisons with others; Festinger, 1954), we desire to make children feel competent and proud.

The focus on downward social comparisons is so pervasive that even in contexts where social comparison information is not salient, children still seek for social comparison information so as to evaluate themselves (Keil et al., 1990). They compare how they stack up against others in many domains involving their status, ability, personality and so on (Cushman & Rogers, 2008). Although this is informative, such comparisons may backfire. Social comparisons may contribute to a desire for superiority over others, focusing children on competition with others. An understudied type of comparison—temporal comparison (comparing one’s present self with one’s past self; Albert, 1977)—might be an alternative approach with a potential to shift children’s mindset away from interpersonal competition (competition with others) toward intrapersonal competition (competition with one’s own self). In this dissertation, I examined whether temporal comparison could give children the same developmental benefits as social comparisons but without the unwanted effects of social comparisons, by conducting both experimental and intensive longitudinal studies.

Social Comparisons

Social comparisons refer to comparisons with others and enable individuals to evaluate whether they are better than others (downward social comparison) or worse than others (upward social comparison; Collins, 1996; Festinger, 1954; Wills, 1981). Social comparisons inherently set a standard against which individuals compare themselves. Using such comparisons as a tool for self-evaluation may give rise to self-conscious emotions such as shame and pride in children and adolescents. Although experimental evidence is missing, there is correlational evidence that shows that children feel ashamed and proud when they reflect on their experiences involving upward social comparisons and downward social comparisons, respectively (Buechner et al., 2018).

Despite the emotionally rewarding nature of social comparisons—especially downward comparisons—there may be risks associated with them. I propose that the most important risk might be that they trigger a desire for superiority over others. A perceived discrepancy resulting from social comparisons between one’s own self and others could make individuals try to maintain or alter this discrepancy in a way that favors the self (Festinger, 1954; Higgins, 1987;

Sedikides & Gregg, 2008; Wills, 1981). A desire to be better than others can contribute to a competitive mindset (Garcia et al., 2013; Tesser, 1988). However, the idea that social comparisons make individuals adopt a desire for superiority over others (perhaps even at the cost of improving oneself) has not been directly tested yet.

From the perspective of self-determination theory, making downward social comparisons could be rewarding in satisfying individuals' needs for competence and autonomy (i.e., the feeling that individuals are good at the things they do and the feeling that they do something interesting and important, respectively; Deci & Ryan, 1985; Ryan & Deci, 2000). Prior research has shown that surpassing peers gives adolescents a sense of competence (Keil et al., 1990; Mansfield, 2010; Reeve & Deci, 1996). Yet, it has not been investigated whether downward social comparisons could make them feel more autonomous. It is possible that downward social comparisons make adolescents feel more autonomous, because opportunities that foster such comparisons are perceived by adolescents as crucial and motivating components of school life, especially in competitive secondary schools (Midgley et al., 1995; Sakiz, 2017). At the same time, downward social comparisons might not be rewarding for adolescents' need for relatedness (Deci & Ryan, 1985). Previous work has theorized that downward social comparisons can make adolescents look down on their peers with disdain (Smith, 2000), which could harm their feeling that they get along well with peers.

Finally, the potential role of social comparisons both in the moment and in daily life in making individuals desire for superiority over others led me to propose a novel hypothesis that downward social comparisons may play a role in maintaining narcissism (i.e., a personality trait that is underlined by an exaggerated sense of self-importance and entitlement; Foster et al., 2003; Thomaes & Brummelman, 2016). Adolescents with high levels of narcissism are at risk for several maladjustments, such as aggression, addiction, anxiety, and poor interpersonal relationships (Thomaes et al., 2009; Thomaes & Brummelman, 2016). Little is known, to date, about how narcissism levels are maintained over time. Through enabling individuals to affirm their belief that they are superior to others, downward social comparisons may lead them to maintain narcissism levels over time.

Adolescents with higher narcissism levels have positive self-views. The same goes for adolescents with higher self-esteem levels (i.e., how individuals feel about themselves as a person; Rosenberg, 1965). However, unlike adolescents with high levels of narcissism, those with high levels of self-esteem do not consider themselves superior to others (Rosenberg, 1965). They pursue good relationships with others rather than superiority over others (Thomaes et al., 2008). Perhaps this is why individuals with higher self-esteem levels do not engage in frequent downward social comparisons as much as those with higher narcissism levels in adulthood (Bogart et al., 2004; Krizan & Bushman, 2011). Yet, we do not if this is also the case in earlier developmental stages. Unlike narcissism, self-esteem drops in adolescence; thus, it is likely that those with lower self-esteem levels make more upward social comparisons rather than downward ones to verify their views of themselves and maintain their self-esteem levels over time. Overall, although downward social comparisons might be emotionally awarding, they might contribute to a desire for and a belief of superiority over others, characteristics that underlie narcissism but not self-esteem.

Temporal Comparisons

In this dissertation, in addition to social comparisons, I zoom in on a rarely studied alternative type of comparisons: temporal comparisons. Temporal comparisons refer to comparisons with one's own selves across time (Albert, 1977). They inform whether one's present self is better than one's past self (downward temporal comparison; Albert, 1977) or is worse than one's past self (upward temporal comparison; Wilson & Ross, 2000). Although temporal comparison theory has been introduced more than 40 years ago, research on such comparisons has remained scarce (Albert, 1977). This is probably because temporal comparisons have been assumed to be used in the absence of social comparison opportunities (Wilson & Ross, 2000). Yet, preliminary research has shown that they are used even when social comparison opportunities are present (Wilson & Ross, 2000). This dissertation is the first to examine temporal comparisons together with social comparisons in the broad developmental group of children and adolescents.

Downward temporal comparisons could be just as emotionally rewarding as downward social comparisons: They might make individuals feel proud by highlighting their improvement over time. On the contrary, upward temporal comparisons might make individuals feel ashamed by highlighting their failure to meet their internal standards, which is a common source of shame (Lewis, 1992; Tracy & Robins, 2004). Thus, downward and upward temporal comparisons might trigger pride and shame in children, respectively. However, these propositions are yet to be tested (Buechner et al., 2018; Weiner, 2005).

One core difference between social comparisons and temporal comparisons is that the latter does not involve comparisons and competitions with others, but rather involves a comparison with one's own self across time (Albert, 1977; Suls & Mullen, 1982). A favorable discrepancy perceived between one's current and past self might make individuals desire to maintain their growth (Albert, 1977). Moreover, a perceived unfavorable discrepancy between one's current and past self (e.g., in competence) could make individuals try to minimize this discrepancy through leveraging their potential, because individuals desire to maintain improvement trajectories (Albert, 1977; Carver & Scheier, 1981; Higgins, 1987). Thus, the predominant desire that temporal comparisons are likely to elicit in individuals would be improvement goals rather than superiority goals. Although no study has examined these possibilities, indirect evidence suggests that contexts that stimulate downward temporal comparisons contribute to an improvement orientation (Covington, 1992).

From the perspective of self-determination theory, making downward temporal comparisons, similar to downward social comparisons, can be rewarding in satisfying individuals' needs for competence and autonomy (Nicholls, 1984). Temporal comparisons might make individuals competent by giving them a sense of progress (Butler, 1987) and autonomy by emphasizing the role of their own effort in achieving their goals (Wang & Liu, 2007). Unlike downward social comparisons, however, downward temporal comparisons could satisfy individuals sense of relatedness. If temporal comparisons contribute to a desire for self-improvement (over superiority over others), they may facilitate relatedness to others by making people open to information exchange and to learn from others so as to meet their desire to self-improve (Poortvliet et al., 2007). Thus, downward temporal comparisons might provide similar

benefits as downward social comparisons and perhaps even more: They might make individuals feel proud and satisfy their basic psychological needs, while focusing them on self-improvement goals over superiority goals.

In addition, I posit that temporal comparisons are unlikely to maintain narcissism levels. Narcissists might engage in such comparisons to feel good about themselves but doing so might not cultivate narcissism. Specifically, downward temporal comparisons are likely to foster a desire for self-improvement instead of superiority. Such comparisons shed a favorable light on the self, but they do not portray the self as superior to others. By not feeding into the core beliefs and motives that underlie narcissism (Brummelman et al., 2018), such comparisons may not maintain narcissism over time. If downward temporal comparisons do not maintain narcissism over time, it would be a novel contribution that paves the way for potential interventions to curtail narcissism. In spite of several calls for interventions to curb narcissism in childhood and adolescence (Brummelman & Gürel, 2019; Brummelman et al., 2018), little is known about how to achieve this.

Developmental Nature of Social and Temporal Comparisons

In this dissertation, I focused on social and temporal comparisons from age 8 onward. This is because social comparisons begin to act as a tool for self-evaluation from that age onward (Keil et al., 1990; Ruble, et al., 1976; Ruble et al., 1980; Ruble & Frey, 1991). Prior to that age, children are able to make spontaneous social comparisons (Mosatche & Bragonier, 1981) and use them to evaluate performance at tasks (Butler, 1998) but cannot use them for self-evaluation (e.g., “I am a better person than others”). Similarly, although children begin to make temporal comparisons from younger ages onward (Butler, 1998), they cannot use them for self-evaluation before age 8 (e.g., “I am a better person than I was before; Harter, 2012; Ruble & Frey, 1991). Starting from this age onward, children’s interest in temporal comparisons grows stronger (Frey & Ruble, 1990; Ruble & Flett, 1988; Ruble et al., 1992), presumably because they find such comparisons more gratifying than social comparisons (Ruble et al., 1994).

When adolescents transition from primary to secondary school, they become more interested in social comparisons (Keil et al., 1990). Using such comparisons, they try to understand the expectations of their new setting and where they stand in their recently formed peer groups (Chartrand et al., 2001; Midgley, et al., 1995; Ruble & Frey, 1991). In this period, downward social comparisons are frequently used to discover superior qualities in relation to those of others, as such superiority might signal social status (Anderson et al., 2012). As adolescents progress toward middle adolescence, upward social comparisons become frequent (Keil et al., 1990; van der Aar et al., 2018), which may act as an inspirational source to catch up with the capabilities of others (Buunk et al., 2005; Ruble, 1994).

The changing school contexts might also contribute to the growing interest in social comparisons. Secondary school-contexts, unlike primary school-contexts, often provide adolescents with normative grades (Maehr & Midgley, 1996). Such emphasis on normative grades might encourage social comparisons for the purposes of self-evaluation (Ames, 1992; Dweck, 1986; Nicholls, 1984). Perhaps as a result, adolescents begin to perceive school

contexts as competitive, encouraging them to focus on surpassing their peers (Eccles & Midgley, 1989; Gonçalves et al., 2017; Midgley et al., 1995; Sakız, 2017; Urdan & Midgley, 2003). This change in school context, however, may also encourage adolescents to use more frequent temporal comparisons. At their new school context, adolescents might need to reflect on how they were before so as to remember their own strengths (Albert, 1977). This might give them some confidence about their current skills and find in themselves a desire for improvement toward their potential (Albert, 1977). During middle adolescence, adolescents' interest in such comparisons might intensify, as they become more certain about their relative social standing among their peers (Ruble & Frey, 1991). Thus, both social and temporal comparisons can be plentiful from middle childhood to middle adolescence.

Present Dissertation

The overarching aim of this dissertation was to understand whether temporal comparisons would offer children and adolescents same benefits with social comparisons but without bringing the potential risks that are associated to social comparisons. Although previous studies have examined social comparisons, they rarely focused on the affective and motivational outcomes of such comparisons among children and adolescents. Furthermore, research in temporal comparisons has remained scarce up to date and no research has examined social and temporal comparisons jointly across middle-to-late childhood (ages 8-10), early adolescence (ages 11-13), and middle adolescence (ages 14-16). To close these gaps in the literature, I examined social and temporal comparisons among youth of a wide age range. Moreover, apart from a pioneering study on the frequency of comparisons in adulthood (Summerville & Roese, 2008), no previous research examined the daily dynamics of social and temporal comparisons. Therefore, in this dissertation I examined daily dynamics of social and temporal comparisons in adolescence as well. The final focus was on the potential role of social and temporal comparisons as intrapersonal mechanisms in the maintenance of narcissism and self-esteem. Most previous studies on this topic involved only social comparisons and were not temporally informative. Overall, this dissertation combined experimental, longitudinal, and correlational designs using samples that span a relatively wide age range so as to address its overarching goal.

In Chapter 2, I examined the immediate impact of social and temporal comparisons on children and adolescents' subjective outcomes, such as emotions and goals. In an experimental study in 12 primary and secondary schools, both qualitative and quantitative data was collected from 583 participants (54.4% girls) aged between 8-18 ($M_{\text{age}} = 11.65$, $SD = 1.92$). In current Western societies, making children feel good is a crucial concern. So as to achieve this, adults often provide children with social comparison opportunities. Unfortunately, such comparison could make children focus on surpassing others, while sacrificing their self-improvement. It is unknown, however, how children could be made to feel good about their achievements without desiring to be better than others and losing their motive for self-improvement. This study was the first to test the hypothesis that temporal comparisons, unlike social comparisons, might make youth feel good about themselves and give them a sense of progress and insight, without making them desire for superiority over others.

In Chapter 3, I examined whether the immediate beneficial effects of temporal comparisons can translate into adolescents' daily life. In a daily-diary study in adolescence with 389 secondary school students aged between 11-15 ($M = 12.69$, $SD = 0.97$; 41.1% girls), I tested the hypothesis that whether daily downward and upward comparisons would co-occur with increased pride and shame, respectively, regardless of whether those comparisons were social or temporal. To focus on the differences between social and temporal comparisons, I tested the hypothesis that whether daily downward temporal comparisons, unlike daily downward social comparisons, would co-occur with a desire for self-improvement over superiority and with feelings of relatedness to others.

In Chapter 4, I examined what the long-term effects are of social and temporal comparisons. In two studies in adolescence (ages 11-15), I focused on whether social and temporal comparisons are related to narcissism and self-esteem and their role as intrapersonal mechanisms in the maintenance of narcissism and self-esteem. More specifically, in a cross-sectional study (Study 1), which involved 382 adolescents (53.7% girls; $M_{\text{age}} = 12.46$, $SD = 1.23$), I tested whether downward social comparisons are made more frequently by adolescents with high narcissism levels, whereas upward social comparisons are made more frequently by adolescents with high self-esteem levels. In a longitudinal study (Study 2), which involved 389 adolescents ($M_{\text{age}} = 12.69$, $SD = 0.97$; 41.4% girls), I tested whether downward social comparisons (but not temporal comparisons) maintain narcissism over a period of 3 months.

Finally, in **Chapter 5**, I provided a general discussion disentangling the similarities and differences between the effects of social and temporal comparison on youth's emotions, goals, and self-views—narcissism and self-esteem. I discussed in what ways this dissertation was novel and advanced our understanding of social and temporal comparisons in child and adolescence development. Lastly, I discussed and speculated on the theoretical and practical implications of these studies and offered directions for future research.