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Applying dimensional comparison theory to the fundamental dimensions of social judgment – Agency and communion

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ABSTRACT

The present research tests predictions of Dimensional Comparison Theory (DCT) with respect to the fundamental dimensions of social judgment, agency (A) and communion (C). A and C represent fundamental challenges every person is confronted with: getting ahead and getting along. It is examined if dimensional comparisons take place in self-evaluations of A and C. Dimensional comparisons are carried out between one's own characteristics in two domains and influence on domain-specific self-concepts, in the way that positive feedback in one domain negatively affects self-concept in the other domain. Study 1 ($N = 493$ students) regressed in a path-analytic design students' self-ascriptions of A and C on peer- and teacher-evaluations of students' A and C. Study 2a ($N = 92$ university students) and 2b ($N = 91$ university students) experimentally studied the effect of feedback on A and C on self-evaluation in the non-corresponding domain. Findings from both studies speak for the existence of contrastive dimensional comparisons between the two domains.

1. Introduction

Dimensional comparisons occur when people compare their perceptions of different domains to evaluate their own domain-specific abilities or other characteristics (cf., Möller & Marsh, 2013; Möller, Müller-Kalthoff, Helm, Nagy, & Marsh, 2016). To date, research on dimensional comparisons mostly deals with comparisons students draw between their achievements in different academic domains and their effects on academic self-concepts. Overcoming such limitations, the recent dimensional comparison theory (DCT; Möller & Marsh, 2013) assumes that dimensional comparisons take place not only in the formation of academic self-concepts, but are a general mechanism in the formation of self-evaluations.

In the present research we will focus on the well-established agency/communion framework that states that agency (A; "getting ahead"; Hogan, 1982) and communion (C; "getting along") are the fundamental dimensions or "Big Two" of judgment of self and others (Abele & Wojciszke, 2014; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Fiske, Cuddy, & Glick, 2007; Paulhus & John, 1998) with strong implications for educational theories like self-determination theory (see below). We will present three studies (one field study, two experiments), in which we will analyze if self-assessments on these fundamental dimensions follow the principles outlined in DCT. Combining reasoning from DCT and reasoning from the A/C framework should enrich both approaches. DCT should benefit if its generalizability to other fundamental domains of self-evaluation can be demonstrated; the A/C framework should benefit if the association of A and C in self-judgments can be more clearly defined. Finally, the demonstration of dimensional comparison effects in self-assessments of A and C has implications for applied questions as we will discuss later in this paper.

1.1. The I/E model and dimensional comparison theory

Educational psychologists have long recognized that beside social comparisons dimensional comparisons serve as psychological processes behind the formation of self-concepts (Marsh et al., 2015a, b; Möller, Retelsdorf, Köller, & Marsh, 2011). The beginning of this understanding is based on the development of the internal/external frame of reference model (I/E model; Marsh, 1986). This model states that students, when forming their subject-specific self-concepts, use external and internal frames of reference at the same time. External frames of reference refer to social comparisons, which take place when students compare their own achievement in one subject, e.g., math, to the achievements of their classmates. Internal frames of reference refer to comparisons that students draw between their achievement in one school subject, e.g., math, and their own achievement in another school subject, e.g., a language (e.g., Möller & Köller, 2001a). This type of comparison is called dimensional comparison. The juxtaposition of social and dimensional comparison processes explains the emergence of almost uncorrelated math and verbal self-concepts despite relatively strong positive

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correlations between teacher-assigned math and verbal grades: While social comparisons lead to positive effects from domain-specific achievement to corresponding self-concept (e.g., from math achievement to mathematical self-concept), dimensional comparisons as described in the I/E model lead to negative effects, so-called contrast effects, from domain-specific achievement to non-corresponding self-concepts. Accordingly, two students with identical math grades may differ in their mathematical self-concept, as a function of their verbal achievement: The student with the higher verbal grades will develop a weaker mathematical self-concept than the student with lower verbal grades. There is ample evidence from path-analytic studies in different countries, with different age groups and using different methodological approaches that dimensional comparisons produce these contrastive effects in the self-concepts for verbal and math subjects (e.g., Köller, Klemmert, Möller, & Baumert, 1999; Möller & Köller, 2001b; Marsh et al., 2014; Marsh et al., 2015a, b; for a meta-analysis on studies related to the I/E model see Möller, Pohlmann, Köller, & Marsh, 2009).

In these studies, frequently high positive correlations between math and verbal achievements, lower correlations between both self-concepts, positive effects from achievement to the corresponding self-concept and negative effects from achievement to the non-corresponding self-concept are found. Beside path-analytical studies, introspective as well as experimental research provides additional evidence for the mechanism and the contrastive effects of dimensional comparison (Möller & Husemann, 2006; Möller & Köller, 2001a; Möller & Savyon, 2003; Pohlmann & Möller, 2009).

Besides contrastive effects, dimensional comparisons can also yield assimilative effects. Studies analyzing the relationships between achievements and self-concepts in two mathematical (e.g., mathematics and physics) or two verbal (e.g., German and English) subjects typically find the effects from achievement to non-corresponding self-concept to be only slightly negative, non-significant or positive (e.g., Jansen, Schroeders, Lüdtke, & Marsh, 2015; Marsh et al., 2014; Marsh et al., 2015a, b; Möller, Streblow, & Pohlmann, 2006a; Möller, Streblow, Pohlmann, & Köller, 2006b). If the effects are positive, they are called assimilative effects, as they cause higher correlations of self-concepts than of achievements in the two subjects. To sum up, contrastive effects of dimensional comparisons seem to be the case when achievements in a mathematical and a verbal subject are compared, and assimilative effects often are the case when achievements in two subjects from the same domain (i.e., within the verbal or the mathematical domain) are compared.

Based on the assumptions of the I/E model and the findings from studies analyzing I/E patterns between different subjects, DCT aims at defining more precisely the preconditions and effects of dimensional comparisons. For the presented studies, its assumptions regarding preconditions of dimensional comparisons are central: DCT predicts that dimensional comparisons are not limited to achievement-related self-evaluations but rather are a general mechanism in the formation of self-evaluations. More precisely, DCT advocates a generalized I/E model (GI/E model; Möller et al., 2016; Fig. 1).

In the GI/E model, a person draws dimensional comparisons when comparing his/her perceptions of characteristics of a particular domain X with his/her perceptions of characteristics of a particular domain Y, and this bears consequences for any kind of thoughts or behaviours the person holds about these domains. Empirical evidence for the GI/E model stems from studies in which students' academic self-concepts in science and foreign languages (e.g., Marsh et al., 2015a, b; Jansen et al., 2015), self-regulated learning (Miller, 2000), emotions (Goetz, Frenzel, Hall, & Pekrun, 2008), intrinsic motivation (Marsh et al., 2015a), interest (Schurtz, Pfost, Nagengast, & Artelt, 2014) and learning environment (Arens & Möller, 2016) were analyzed. These studies consistently provide support for dimensional comparisons resulting in contrast effects between achievements in one domain and any kind of outcome in non-matching (comparison) domains.

So far, predictors have been restricted to indicators of achievement and criteria have commonly addressed students' motivation in cognitive (e.g., self-concept, interest) or behavioral terms (e.g., self-regulation). However, the scope of dimensional comparison processes might be even broader. The presented studies aimed to test whether the assumptions of DCT formulated in the GI/E model are also applicable to two central dimensions of a person's self-concept, namely agency and communion.

1.2. The agency/communion framework

Research has consistently revealed that there are two fundamental content dimensions – also called the "Big Two" – in many fields of social and personality psychology. These are the content dimensions of agency and communion. Coined by Bakan (1966), those conceptual labels have provided an effective framework for, among others, the analysis of self-perception and personality (for reviews see Abele & Wojciszke, 2014; Fiske et al., 2007; Judd et al., 2005; Paulhus & John, 1998; Paulhus & Trapnell, 2008). While agentic content refers to qualities relevant for goal-attainment, such as being ambitious or capable ("getting ahead", Hogan, 1982), communal content refers to qualities relevant for the establishment and maintenance of social relationships, such as being friendly or fair or showing empathy ("getting along", Hogan, 1982). A and C capture the two recurring challenges of human life: pursuing individual goals and belonging to social groups (Ybarra et al., 2008).

The two concepts of A and C are related to central concepts in educational psychology literature explaining student motivation, one famous example being the needs for competence and autonomy (A) and the need for relatedness (C) in self-determination theory (Deci & Ryan, 1985, 1991; Deci, Vallerand, Pelletier, & Ryan, 1991). Satisfaction of these needs has been shown to support intrinsically motivated behavior (e.g., Anderson, Manoogian, & Reznick, 1976; Blanck, Reis, & Jackson, 1984; Fisher, 1978; Grolnick & Ryan, 1989; Harackiewicz & Larson, 1986; Ryan, 1982; Vallerand, 1983). It thus can be assumed that a striving for agentic and communal goals and the satisfaction of these goals, manifested in high self-concepts in A and C, has a positive impact on student motivation and achievement. Moreover, agentic and communal

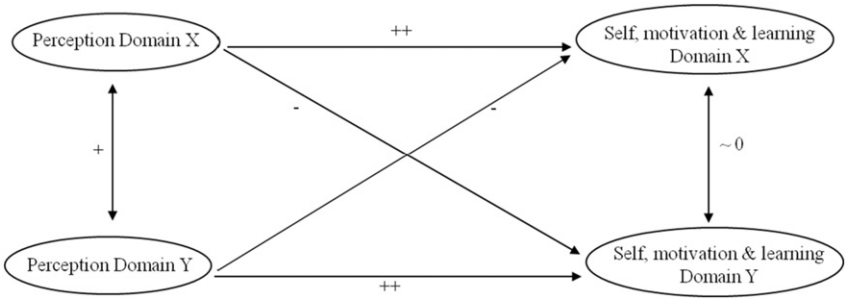

Fig. 1. The generalized I/E model. An extension of the I/E model to other domains and consequences (Möller, Müller-Kalthoff, Helm, Nagy, & Marsh, 2016).