Need-supportive and Need-thwarting Socialization:

A Circumplex Approach

CIRCUMPLEX APPROACH

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Abstract

To support motivation, growth, and performance it is critical to foster individuals' basic psychological needs for autonomy, competence, and relatedness. To achieve this goal, socializing agents, such as teachers, sport coaches, and managers, can make use of a broad array of need-relevant strategies that can either support or thwart students', athletes', and employees' psychological needs. Central to this chapter is the discussion of a circumplex approach, which allows for an integrative and fine-grained study of different need-relevant styles. We discuss the basic tenets of this approach, review recent supportive studies, highlight its advantages and potential for practice, and provide recommendations for future research.

Keywords: need support, need thwarting, socialization, self-determination theory, circumplex

Socializing agents, including parents, teachers, sports coaches, and managers, play an important role in the broader process of learning and development throughout the life course, as they help children and (young) adults to acquire the beliefs, values, skills, and resources needed to live and participate in society (Baumrind, 2012; Wallace & Wolf, 1999; Wentzel, 2009). In this socialization process, they are often confronted with the task to motivate others. Teachers need to motivate students to submit their homework on time, sports coaches need to stimulate athletes to persist at a monotonous strength training regimen, and managers have to find a way to encourage employees to take over tasks from an ill colleague. When tasks require persistence or flexibility and have little intrinsic appeal, socializing agents need creativity and patience to motivate others (Reeve, 2015).

The question of how to best motivate others is a topic of lively discussion among teachers, coaches, and managers themselves. An argument that is often voiced is that a strategy that is motivating for one person is not necessarily motivating or even demotivating for another person and vice versa. To illustrate, whereas some students, athletes or employees would like their teacher, coach, or manager to provide more support and guidance, others prefer more independence. Likewise, some like predictability, whereas others want to deviate from the daily routines by engaging in novel tasks (Benlahcene, Kaur, & Awang-Hashim, 2020). In the search for which motivating approach works best for whom and when, socializing agents often rely on trial and error, or their intuition and lay beliefs about ideal motivating strategies. Although people's intuition can sometimes be spot on, it can also misguide them, leading them to under- or overestimate the effectiveness of motivational strategies or failing to adjust their motivational strategy to the situation at hand. To guide and refine one's motivational approach, a theory-driven perspective about what makes for a 'good' and effective socializing agent and what makes for a 'poor' and demotivating socializing agent is needed.

Self-Determination Theory (SDT; Ryan & Deci, 2017) offers such a fundamental theoretical perspective that can guide everyday motivational practices across varied situations and interactions with different others. A central premise of SDT is that, even though every student, athlete, or employee is unique, and every situation is different, there is a critical set of basic motivational processes that socializing agents need to take into account to optimally motivate others. Specifically, motivating socializing agents do well to nurture individuals' basic psychological needs for autonomy, competence, and relatedness (Vansteenkiste, Ryan, & Soenens, 2020).

In this chapter, we present a circumplex approach, a new integrative and fine-grained perspective on motivating and demotivating socialization that was recently developed. We discuss the implications of the circumplex approach for both theory and practice and provide a number of suggestions how to move this literature forward.

Need-Supportive and Need-Thwarting Socialization

Theoretical Foundation. SDT starts from the assumption that all individuals have a set of basic psychological needs, the satisfactions of which are considered essential nutriments for individuals' growth and well-being (Ryan & Deci, 2017; Vansteenkiste et al., 2020). Across diverse life domains, including education, health care, sports, parenting, and the workplace, abundant research has shown that the satisfaction of the needs for autonomy (i.e., experiencing a sense of volition), competence (i.e., experiencing a sense of effectiveness) and relatedness (i.e., experiencing a sense of connection) relates to high-quality motivation, engagement, deep-level learning, performance and mental health (see Vansteenkiste et al., 2020 for an overview). Although individuals can be low in need satisfaction, their needs can also get more actively threatened, entailing the experience of need frustration. Need frustration manifests through experiences of obligation and conflict (autonomy), failure and inadequacy (competence), and loneliness and exclusion (relatedness), with research indicating that such experiences are

especially predictive of individuals' disrupted functioning as indexed by disengagement and ill-being, including stress, burnout and physical symptom burden (Bartholomew et al., 2011; Vansteenkiste & Ryan, 2013).

Given the significant importance of need-relevant experiences, the question how socializing agents can foster or undermine basic needs through their motivating style has received considerable attention (Reeve, 2021; Vansteenkiste et al., 2019). SDT maintains that three dimensions of need-supportive (i.e., motivating) socialization, that is, autonomy support, structure, and relatedness support, are conducive to need satisfaction, autonomous motivation, and well-being (Ryan & Deci, 2017). In contrast, controlling, chaotic and rejecting environments involve a more direct thwarting of the basic needs (i.e., demotivating socialization), and have been found to predict need frustration, controlled motivation, ill-being and even psychopathology (Vansteenkiste & Ryan, 2013; Ryan, Deci, & Vansteenkiste 2016).

Autonomy support and Control. Historically, autonomy support has received the most attention within SDT (e.g., Grolnick & Ryan, 1987) in part because the need for autonomy is both most unique to the theory and most controversial (see Ryan & Deci, 2017). It is also emphasized within SDT because autonomy-supportive socializing agents are also likely to support competence and relatedness needs as well (Vansteenkiste et al., 2020). When autonomy-supportive, the basic attitude or interpersonal tone of socializing agents is one of curiosity, receptivity, and flexibility for the emerging interests, preferences, and values of others (Vansteenkiste & Soenens, 2015; Vansteenkiste et al., 2019), which allows them to be more responsive to others' inner resources and to identify obstacles for motivation and action (Reeve, Jang, & Jang, 2018).

Over time, several critical practices of autonomy-supportive socialization have been identified (Patall et al., 2018), including the offer of input and choice, the provision of a meaningful rationale, following others' pace of progress, the use of inviting language, the

nurturing of curiosity and task interest and the acceptance of negative affect (Reeve, 2009; 2021; Vansteenkiste et al., 2019). While some studies investigated these practices in isolation (e.g., choice: Waterschoot et al., 2019; meaningful rationale: Jang et al., 2008), others examined them in combination (e.g., Deci et al., 1994). Generally, the effects of different autonomy-supportive practices have been found to be synergistic such that combining factors enhances the effects. For example, the motivating effect of a meaningful rationale appears to be heightened if combined with other autonomy-supportive practices, such as the use of non-controlling language and the acknowledgement of negative affect (Gillison et al., 2019; Steingut, Patall, & Trimble, 2017 for meta-analyses).

Dozens of studies found that perceived autonomy support fosters need satisfaction and brings multiple behavioral, emotional, and social benefits for students, athletes or employees. This evidence has recently been compiled in a number of systematic reviews and meta-analyses in the domains of (physical) education (Lochbaum & Jean-Noel, 2016; Vasconcellos et al., 2019), health (Gillison et al., 2019; Ntoumanis et al., 2020), and work (Slemp et al., 2018).

Whereas autonomy support involves practices that nurture need-based experiences, the use of control may not only leave basic needs unsatisfied but even thwart them, thereby engendering need frustration (Vansteenkiste & Ryan, 2013). When being controlling, socializing agents, often unconsciously, adopt a tunnel-view in which their own agenda and expectations get prioritized, which leads them to exert pressure on others to think, feel and act in prescribed ways and to leave little or no room for others' perspective (Reeve, 2009). Such pressure can take the form of threatening with sanctions, commanding, yelling, and shouting or the contingent use of incentives and rewards (i.e., external control), or it can involve appealing to feelings of guilt and shame, using power-assertive strategies such as intimidation, and triggering contingent self-worth (i.e., internal control; Soenens et al., 2012).

Initially, autonomy support and control were treated as the two poles of a single bipolar continuum (Deci et al., 1981; Reeve, 2009). Yet, over the past decade, the practice of control was increasingly studied in its own right, leading to the introduction of a dual-process model (Bartholomew et al., 2011; Vansteenkiste & Ryan, 2013). Rather than treating autonomy support and control as antithetical, it was recognized within the dual process model that socializing agents' non-reliance on autonomy support does not automatically imply that they act in a controlling way. To illustrate, while some socializing agents may fail to offer choice or to provide a meaningful rationale (i.e., autonomy support), this does not imply that they rely on threats and sanctions to enforce compliance (i.e., control). Also, some socializing agents may, across situations, make use of a combination of both autonomy-supportive and controlling strategies. Congruent with this assumption, empirical studies pointed to moderate ($-.50 < r < -.30$; Bartholomew et al., 2011;) or small ($-.30 < r < -.10$; Haerens et al,. 2015) negative correlations between perceived autonomy support and control.

A growing number of both cross-sectional and longitudinal studies (e.g., Jang et al., 2016) now provides convincing evidence that autonomy support and control represent distinct processes with differential and unique antecedents and outcomes (Vansteenkiste & Ryan, 2013). In addition, person-centered approaches that capture different configurations of motivating styles indicate that different combinations or profiles of autonomy support and control can be identified, with the profile involving high autonomy support and low control yielding the most optimal pattern of outcomes (Haerens et al., 2018; Matosic & Cox, 2014)

Autonomy support and structure. Much like autonomy support, the provision of structure is also said to be need-conducive. The basic attitude or interpersonal tone underlying structure involves a process-oriented focus, with socializing agents displaying trust in others' capacity to steadily advance their skills. This attitude allows socializing agents to better align their practices with others' momentary skill level, strengths and learning potential, while also

identifying obstacles for progress. Structuring socializing agents foster competence need satisfaction through communicating clear expectations, goals and guidelines, providing step-by-step "how to" directions to attain the desired expectations, offering desired help and guidance, adjusting tasks' difficulty levels in accordance with students', athletes' or employees' skills, providing positive informational feedback during and after task completion and expressing confidence in students' capabilities (Reeve, 2006; Ryan & Deci, 2017; Vansteenkiste & Soenens, 2015).

Historically, SDT investigators viewed both autonomy support and structure as factors facilitating internalized motivation and durable engagement (see Grolnick, Ryan, 1989; Grolnick, Ryan & Deci, 1991), rather than as at odds with each other. Consistent with such theorizing, several studies have reported positive correlations between both dimensions, indicating that structuring socializing agents also act in autonomy-supportive ways and vice versa (Jang et al., 2010). At the same time, structuring elements (e.g., expectations, help) can be provided in an autonomy-supportive (e.g., by using inviting language or providing meaningful rationales) or in a controlling (e.g., by threatening with sanctions for those who do not follow the guidelines) way, with this style of introduction enhancing or diminishing the motivational benefits of structure. For instance, the benefits of setting expectations (Vansteenkiste et al., 2012) or introducing behavioral rules (Koestner et al., 1984) are more pronounced when provided in an autonomy-supportive way, while the competence-frustrating effect of negative feedback (Carpentier & Mageau, 2013; Mabbe et al., 2018) and task difficulty (Baten et al., 2020) gets diminished when introduced in an autonomy-supportive way.

While structure has received increasing attention, the separate role of chaos has been largely understudied in the SDT-literature (but see Skinner, Johnson, & Snyder, 2005). Chaos includes practices that are inconsistent, unpredictable, and arbitrary, or actively interfere with the pathways to competence development (e.g., pointing out failure, doubting others' capacities

to improve; Rocchi, Pelletier & Desramais, 2017). Chaos can take the form of permissiveness (Baumrind, 2012) where socializing agents fail to consequently stick to introduced guidelines and rules (i.e., laissez-faire climate) or the form of enforced independence where socializing agents leave others to their own device, presumably because they feel unable or lack the energy to provide the required assistance (see Soenens, Vansteenkiste, & Sierens, 2009). Empirical work on the notion of chaos is currently fairly scarce, yet available research in the sports context indicates that a chaotic coaching style is predictive of less need satisfaction and autonomous motivation, and more need frustration and controlled motivation among athletes (Rocchi et al., 2017).

Towards an Integrative Approach: A Circumplex Model

Circumplex structure. Recently, various studies have begun to examine different (de)motivating styles in conjunction to achieve a more integrative understanding of need-supportive socialization. Multidimensional scaling analyses (MDS; Borg, Groenen & Mair, 2013) are being harnessed to model how different need-supportive (i.e., autonomy support and structure) and need thwarting (i.e., control and chaos) practices relate to each other in varied settings including education (secondary education, Aelterman et al., 2019; higher education; Vermote et al., 2020; physical education, Escriva-Boulley et al., 2021), sport (Delrue et al., 2019), nursing (Duprez et al., 2019), parenting (Mabbe et al., 2021), and work (Aelterman et al., 2021).

Across these different settings, a two-dimensional circumplex structure has been identified (see Figure 1), which allows for a more integrative insight into the variety of socialization practices. The horizontal dimension (i.e., x-axis) denotes the extent to which socializing agents support, relative to thwart, individuals' basic psychological needs, with autonomy support and structure representing need-supportive styles and control and chaos representing need thwarting styles. The vertical dimension (i.e., y-axis) reflects the extent to

which socializing agents are directive and take the lead in the interaction or instead leave the initiative and action more to those that need to be motivated. When considered from this dimension, structure and control represent highly directive styles and autonomy support and chaos represent less or even non-directive interaction styles (Aelterman et al., 2019). Each of the four overarching styles can thus be characterized by its level of need support and directiveness, with adjacent styles (e.g., structure and control) sharing one feature and oppositional styles (e.g., autonomy support and control) scoring differently on both dimensions. It should be noted that the oppositional location of autonomy support and control does not imply that both should be considered as falling along a single bipolar continuum. Congruent with the dual-process model, autonomy support and control and structure and chaos were found to be moderately (but not perfectly) negatively correlated (Aelterman et al., 2019).

The circumplex model also produces a more refined insight as eight subareas were identified, with each overarching style being broken down into two subcomponents that differ in a more subtle way from each other. Across different life domains, these eight subareas 'naturally' emerged from the data, with socialization practices within a specific subarea forming a coherent cluster of practices (i.e., approach). Table 1 provides an overview of the definitions of the four overarching socialization styles and a description of the eight identified approaches in the circumplex model (Aelterman et al., 2019). Specifically, when autonomy-supportive, socializing agents use practices that are *participative*, such as offering choice, asking for students, athletes' or employees' input and welcoming their suggestions, or *attuning*, such as acknowledging negative affect and resistance, promoting task interest, and explaining the personal relevance of a task or request. When providing structure, socializing agents can make use of *guiding* practices, such as offering appropriate help, encouragement, and growth-oriented feedback, or *clarifying* practices, such as setting clear goals and expectations. Reflective of a controlling style, socializing agents can rely on both *demanding* practices, such as the use of

forceful language or threatening with sanctions, or *domineering* practices that are more intrusive and manipulative, such as guilt-induction or public shaming. Finally, socializing agents who adopt a chaotic style are rather indifferent towards others' progress, thereby either relying on *abandoning* practices, as when they are unresponsive to others' struggles and concerns or have given up on earlier introduced rules and agreements when encountering resistance, or relying on *awaiting* practices by not intervening when more direction is needed and seeing how things unfold (Aelterman et al., 2019).

Congruent with their location in the circumplex, these eight approaches are meaningfully related to one another, with the correlations representing a sinusoid pattern. That is, each approach is most positively correlated with an adjacent approach, with the strength of the correlations gradually decreasing, becoming non-significant and negative when moving to the opposite approach in the circumplex. To illustrate, an attuning approach correlates highly positively with a participative and guiding approach, with these correlates becoming decreasingly positive and even negative in the case of a domineering approach. This ordered pattern of correlates is reminiscent of the pattern of correlates typically observed between the regulatory subtypes of SDT's motivational continuum (Ryan & Deci, 2020). Like the SDT simplex model, the circumplex model appears fairly stable across life domains (e.g., education, sport, nursing, parenting, work), respondents (e.g., teachers versus students) and settings (e.g., team vs. individual sports). Studies have even found the structure of the circumplex to be similar for students and teachers in a secondary education setting (Aelterman et al., 2019) and for sport coaches and athletes (Delrue et al., 2019).

Relations with outcomes. Across different contexts (e.g.., education, sport and work), this sinusoid pattern of correlations was also systematically found in relation to a variety of outcomes (see Figure 2 for an example), with the attuning and guiding approaches yielding the strongest correlations with positive outcome variables, and correlations gradually decreasing

and becoming negative as one moves along the circumplex to the domineering and abandoning approaches. Clearly, the sharpest peaks and drops in the pattern of correlates with adaptive outcomes vary primarily as a function of the need-supportive and need-thwarting properties of each approach (i.e., the horizontal axis) and far less as a function of the level of directiveness characterizing each approach (i.e., the vertical axis). Said differently, there are different ways of being highly and lowly directive as a socializing agent, with some being more need-conducive and others being more need-undermining.

To illustrate, the more students (Aelterman et al., 2019) and athletes (Delrue et al., 2019) feel that their teachers/coaches attune their style to students' or athletes' preferences and offer appropriate guidance, the more they have their basic psychological needs fulfilled, the more they report being autonomously motivated, and the more they rate their teacher or coach positively, such that they would highly recommend him/her to others and would like to be taught or coached by him/her in the future again. In addition, employees who experience their manager as attuning and guiding are most satisfied with their job and are most likely to take up commitments within the organization that are not part of their contractual tasks (i.e., organizational citizenship behavior; Aelterman & Vansteenkiste, 2021). In contrast, negative outcomes, including experienced need frustration, controlled motivation, amotivation and symptoms of burnout such as emotional exhaustion and depersonalization, yield an opposite pattern, with the domineering and abandoning approaches being most positively related and the attuning and guiding approaches being most negatively related (Delrue et al., 2019).

Relations with antecedents. The approaches in the circumplex model yield a similar ordered pattern of correlates with antecedents, including socializing agents' type of motivation, need-based experiences, and socialization goals. First, autonomously motivated socializing agents are more likely to adopt all four need-supportive approaches (i.e., participative, attuning,

guiding and clarifying), whereas those who are amotivated or controlled motivated are more likely to adopt need thwarting approaches (Aelterman et al., 2019; Vermote et al., 2020).

Second, the more socializing agents have their own basic needs fulfilled, the more they report making use of need-supportive approaches (i.e., attuning and guiding, followed by participative and clarifying; Aelterman et al., 2019; Delrue et al., 2019; Vermote et al., 2020). Presumably, experiences of need satisfaction are vitalizing and boost socializing agents' energy (e.g., Karkkola et al., 2019), which may enhance their psychological availability towards others (Van der Kaap-Deeder et al., 2019). In contrast, need frustration predicts a domineering and demanding approach, or failing to intervene when action is called for (i.e., abandoning and awaiting; Vermote et al., 2020), an effect that can be carried by the stress and associated narrow focus on one's own agenda and needs (Van der Kaap-Deeder et al., 2019).

Third, the type of socialization goals that socializing agents adopt (Jang, 2019) and their beliefs regarding the malleability of intelligence (Vermote et al., 2021) are equally predictive of their (de)motivating style. If socializing agents aim to help others in realizing their interests and dreams or in becoming empathic and socially engaged individuals, they are more likely to act in autonomy-supportive ways. In contrast, the more socializing agents embrace extrinsic goals, such as the pursuit of excellence and gaining high social status and approval, the more they adopt a pressuring and controlling style (Jang, 2019). Furthermore, socializing agents with a growth mindset, conceiving intelligence as changeable through learning and effort (Dweck, 2008), report making use of structuring approaches (i.e., guiding and clarifying; Vermote et al., 2020), presumably because a growth mindset comes with a process-oriented focus central to structure. If socializing agents hold the belief that achievement is mainly determined by innate differences in intelligence (i.e., fixed mindset), they report engaging less in autonomy-supportive approaches (i.e., participative and attuning) and more in controlling approaches (i.e.,

demanding and domineering), and are even more likely to give up (i.e., abandoning approach; Vermote et al., 2020).

The Benefits of a Circumplex Perspective

The circumplex approach has important implications for current theorizing and research as it allows one (a) to adopt a more graded or ordered understanding of need-relevant socialization practices, (b) to adopt a more refreshing outlook at the interrelation between different need-relevant styles, and (c) to gain a better understanding of the pitfalls associated with the application of autonomy support and structure.

A graded approach. The more holistic perspective of the circumplex is illuminating as it allows for a better understanding of the interrelation between different (de)motivating styles. Instead of treating these styles in isolation and conceiving them as distinct styles that should yield unique correlates, the ordered pattern of correlates warrants a more graded and dynamic perspective. The reasoning behind this ordered approach is that the different (de)motivating approaches do not differ from each other in a categorical (i.e., black-white) fashion, but instead are more graded in their relations.

Indeed, across different contexts, the pattern of correlations suggests that the need-nurturing potential of the different styles in the circumplex may vary. Specifically, because of their most pronounced *need-satisfying* properties, the guiding and attuning approaches are labeled as directly need-nurturing (Aelterman et al., 2019). Instead, the participative and clarifying approaches yield somewhat less strong correlations with desirable outcomes presumably because of their *need-enabling* character. That is, when being participative or clarifying, socializing agents create the conditions for students', athletes' or employees' need satisfaction to occur, yet their need satisfaction is not necessarily guaranteed (Aelterman et al., 2019; Vansteenkiste et al., 2019). For example, although the offer of choice is potentially autonomy-enhancing, its effect likely depends on a number of criteria, including the nature of

the choice (i.e., option choice versus action choice; De Muynck et al., 2019), the type of offered options (i.e., trivial versus meaningful; Pan & Gauvin, 2012), the number of options (Patall, Cooper, & Robinson, 2008), the way in which the choice is provided (i.e., informational versus steering; Moller, Deci, & Ryan, 2006), as well as characteristics of the chooser (Waterschoot et al., 2019). Likewise, socializing agents can communicate clear goals and expectations, yet its motivating effect likely depends on the style of conveying these expectations (i.e., informative versus evaluative; Vansteenkiste et al., 2012) and the nature of the information being provided (i.e., useful versus redundant; Goemaere et al., 2019).

This circumplex's ordering of styles also applies to the variation in the demotivating practices: socializing agents' adoption of domineering and abandoning approaches are highly *need thwarting*, thereby actively undermining students', athletes' or employees' psychological needs, motivation, and engagement, whereas the reliance on demanding and awaiting approaches yields a more modest need thwarting effect, even being *need-depriving*. That is, they may fail to support psychological needs and motivation without eliciting intense need frustrating experiences.

Interrelations between need-relevant styles. The circumplex also allows one to understand the high correlations that have sometimes been reported between structure and autonomy support in past studies (e.g., Rocchi et al., 2017). Given their adjacent position in the circumplex, such high correlations are to be expected, especially in the case of the attuning and guiding approach. Among athletes, these two approaches were even found to be so heavily intertwined that they could not be factor-analytically separated (Delrue et al., 2019). Yet, rather than being problematic and signaling a lack of discriminant validity, such high correlations can now be positively appreciated, that is, they simply reflect reality. The reason why a guiding and attuning approach are highly related is because both approaches are highly need-supportive. In addition, a circular structure may better align with daily reality as socializing agents often

simultaneously engage in a variety of need-supportive or need-thwarting practices in a given situation. At the same time, the circumplex highlights that there is variation in the association between autonomy-support and structure, with the approaches that yield a more distal relation to each other (i.e., clarifying and participative) being less highly correlated. These findings are congruent with prior person-centered work indicating that teachers can be perceived to set expectations for their students in a more autonomy-supportive or a more controlling way (Vansteenkiste et al., 2012).

Another implication of the circumplex is that different need-supportive dimensions do not necessarily need to compete for unique variance in outcomes. Scholars have sometimes pitted need-supportive dimensions (e.g., autonomy support and structure) to examine which one yields the strongest predictive power. Although informative, the quest for unique correlates is not always the important focus. Rather what matters especially is the ordered pattern of correlates, with the positive or negative peak in the correlates being outcome-dependent.

Pitfalls in the application of autonomy support and structure. The circumplex model provides a better understanding of the fallacies that socializing agents may have encountered in the application of autonomy support and structure in practice. Specifically, some socializing agents may be concerned that supporting students', athletes' or employees' autonomy may undermine structure or even lead to a permissive climate (i.e., chaos), in which no goals and expectations are set, or rules are no longer being established. The circumplex model shows that such concerns are legitimate. Importantly, this potential pitfall does not pertain to the concept of autonomy support in itself, but to its incorrect application in practice, with socializing agents shifting towards a too open, awaiting and permissive approach. Indeed, some students, athletes or employees may feel overwhelmed by the room for initiative and the possibility for independent choice making, because they lack the capabilities, skills or necessary information to adequately partake in the participatory process. On these moments or for these individuals,

the offer of choice would need to be complemented with some degree of structure for them to benefit in terms of their-need based experiences. Thus, a poorly structured participative approach may indeed be perceived as chaotic, an outcome that a need-supportive socializing agent would avoid.

At the same time, socializing agents sometimes are concerned that providing too much structure might place students, athletes or employees under pressure to think, feel and behave in prescribed ways and inhibit their initiative and creativity. Indeed, although the provision of structure and guidance are important to foster students', athletes' or employees' competence development, an overly structuring approach may turn into rigid control and pressure. Again, the circumplex helps to understand why the incorrect application of a clarifying approach comes with a motivational pitfall, as the clarifying and demanding approach are situated next to each other. Specifically, what may be described as well-intended expectations, goals and guidance by a socializing agent, may be perceived as pressure and coercion by the student, athlete or employee. Given that it is especially the perception of the social environment that is predictive of students', athletes' or employees' motivational experiences (De Meyer et al., 2014), the communication and monitoring of goals, expectations and guidelines (i.e., clarifying approach) will only be growth-promoting if they are experienced as really supportive of the need for competence.

Overall then, in daily practice, at least for some autonomy-supportive practices, there appears to be a fairly thin line with chaos. Similarly, some structuring practices, when not well timed or applied in practice, may be appraised as controlling. Yet, these practical pitfalls do not hold to the same extent for all identified approaches, but especially for those that lean closer to the chaotic style (i.e., participative approach) and the controlling style (i.e., clarifying approach)

Motivational Tailoring and the Capacity for Calibration

The ordered or graded pattern of motivating approaches in the circumplex highlights that there are many in-roads to need satisfaction, thereby opening the door for motivational tailoring. Specifically, for socializing agents to optimally motivate others, they need to be capable of calibrating their motivating approach to characteristics of their students, athletes or employees and the situation at hand (Vansteenkiste et al., 2019). Even though socializing agents may know the specific strategies (e.g., offering choice; giving a rationale; providing progress-oriented feedback) that are characteristic of a motivating style, this does not mean that they make optimal use of them in their daily practice. They additionally need to be sensitive to the order, the timing, and the circumstances in which they use various strategies, and thus to the functional significance (Ryan & Deci, 2017) of the particular strategies they rely on. For example, at the start of a learning activity, teachers will probably adopt different strategies such as giving instructions or providing an overview of the assignment, than halfway through the activity, where they are more likely to offer help and provide feedback (Haerens, et al., 2013). Coaches will likely react differently when athletes disrupt the training than when athletes cooperate enthusiastically (Delrue, et al., 2019). And managers likely act in more directive and task-oriented ways when facing an organizational crisis compared to when a crisis is not an issue (Gagné et al., 2020). The skill for calibration would signal that socializing agents have acquired the capacity to respond in adaptive and flexible ways to the constantly changing circumstances and reactions they are facing in their daily practice (Vansteenkiste et al., 2019).

Socializing agents' capacity for calibration is a multilayered skill, involving that they 1) start from the basic attitudes of curious interest, a process-oriented focus and sincere respect and care in order to optimally connect with their students, athletes or followers, 2) make a well-considered choice of which socialization style and strategy to use when, and 3) continuously monitor and adjust their socialization style in function of changing circumstances as to optimally nurture others' basic need at all times (Vansteenkiste et al., 2019). By endorsing a

need-supportive basic attitude, socializing agents gain insight in and learn to better estimate what is on students', athletes' or employees' minds. They become more aware of their various personal attributes, including their motivation ("Do my employees find this a tedious or an exciting task?"), preferences ("Do my students prefer to complete this assignment in class or in small groups?"), and knowledge and skills ("Are these gifted children who want to be challenged more?"). At the same time, well-calibrating socializing agents are aware of a variety of environmental features, including characteristics of the task ("Is this a difficult or too simple task?") and of the situation at hand, such as the size of the group, the moment of the day ("Is it a Friday afternoon?"), time pressures, uncertainty, or the heterogeneity of the group.

Although socializing agents may infer some of this knowledge themselves, the best way to get an insight into students', athletes' or employees' personal attributes is probably by giving them voice. By fostering the participation of their students, athletes or employees, socializing agents can gain more accurate information about their viewpoints, instead of being misguided by a biased perspective on students', athletes' or employees' goals and interests. In this context, it was shown that first inferring in which way the learning material can best be taught according to students and subsequently teaching the class in student-preferred ways promoted greater autonomy, engagement and deep level learning compared to a group that was taught as usual (Jang et al., 2016).

Further, equipped with this knowledge, well-calibrating socializing agents are capable of selecting the motivating style (e.g., guiding) and associated practice (e.g., providing appropriate help) that best fits with others' needs and situational requirements. Such motivational tailoring between socializing agents' practices and these various personal and environmental features requires ongoing awareness of the dynamics in the situation. Motivational tailoring then maximizes students', athletes' or employees' opportunities to have their basic psychological needs met. Such tailoring may look fairly different from individual to

individual, or from situation to situation, such that there might be quite some variability in individuals' pathways to enhanced need satisfaction. Yet, well-calibrating socializing agents have one key goal in mind: to maximally support their students', athletes' or employees' basic needs. The observable diversity and heterogeneity of used motivating strategies by socializing agents thus masks an underlying shared process of improved need satisfaction. For instance, while a participative style may be more warranted for already highly engaged students, thereby allowing them to advance their knowledge and skill levels independently, other students may benefit more from a guiding style, thereby providing adjusted help and a step-by-step approach (see Patall, Sylvester, & Han, 2014).

Finally, calibration involves the continuous monitoring of whether currently used motivating practices truly 'catch on'. This requires substantial flexibility and a self-critical attitude from the side of motivating agents to adjust their motivating style. Through this monitoring process, well-calibrating socializing agents are better able to use multiple motivating strategies, paying attention to the order (e.g., 'Should I first recognize the source of their irritation and resistance before giving a rationale?') and the time spent on each of the motivating practices (e.g., 'Should I continue asking employees' input or move towards clarifying my expectations?'). Because the preferences and knowledge of the ones being socialized are often fluctuating, it is possible that a motivating practice that initially increased their need satisfaction and engagement, loses its motivational potential on a later moment in time (Vansteenkiste et al., 2019).

Future Directions

First, although the circumplex model includes a broad variety of need-supportive and need-thwarting practices, the model is not exhaustive or complete. As research evolves, the circumplex model may be further refined or extended through the assessment of additional practices and styles. Specific styles such as adjusting the pace of progress to individuals' needs,

offering rewards, and giving positive feedback can be mapped within the model. In addition the broader dimension of the support and thwarting of relatedness (e.g., Gonzalez & Chiviacowsky, 2018; Sparks et al., 2016) deserve being explored in relation to the circumplex. Further, it needs to be examined whether a differentiated circumplex emerges in every life domain or culture, with different life domains or cultures potentially impacting the extent to which different practices cluster together or fall apart. For instance, in the nursing context, the four overarching styles could be identified, thus creating room for further operational improvements to examine whether these can eventually be broken down into subcomponents (Duprez et al, 2019).

Further, notions such as classroom management and cognitive activation (Klieme, Pauli, & Reusser, 2009; Pianta & Hamre, 2009) or transformational and transactional leadership (Bass, 1985; Day, 2014) can likely be situated in the circumplex, thereby possibly forming a hybrid of different identified subareas. Furthermore, it can be examined how the circumplex relates to other developed taxonomies, including the model for interpersonal teacher behavior which is grounded in interpersonal theory (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006) and the leadership circumplex (Redeker, de Vries, Rouckhout, Vermeren & De Fruyt, 2014). This attempt for cross-fertilization may help to fill voids in the proposed circumplex, to provide deeper insight why certain socialization practices have been found to be effective and to shed light on the unique and complementary nature between the proposed circumplex and other concepts and models in the field.

Second, while the circumplex allows zooming out, thereby thus adopting a helicopter or macroscopic perspective, this movement could be coupled with a microscopic perspective, thereby zooming in into specific practices through a process of deconstruction. That is, the circumplex model indicates that need-relevant styles (e.g., autonomy support) fall apart into different need-relevant approaches (e.g., attuning, participative), which, in turn, compromise a variety of need-relevant practices (e.g., offering a rationale, promoting interest). To make the

circumplex amendable for daily practice and intervention research, this layered perspective can be continued by examining the diverse strategies to operationalize a need-relevant practice. To illustrate, choice, a critical practice belonging to the participative approach, can be differentiated into option and action choice (Reeve, Nix & Hamm, 2003), with option choice involving the offer of a menu of options from which students, athletes or employees can choose what to do and action choice involving choice regarding how assignments or exercises are executed (e.g., order, pace). Also, future work can examine the optimal conditions to maximize the need-actualizing potential of a specific need-supportive practices. To illustrate, the motivational potential of a rationale gets better actualized if the rationale is intrinsic goal oriented (Vansteenkiste, Lens, & Deci, 2006).

Third, the circumplex model provides interesting avenues for future research adopting a person-centered approach towards socialization. The circumplex model identifies critical subareas of (de)motivating socialization but socializing agents' daily socialization style consists of combinations of different subareas. Past research (see Matosic & Cox, 2014; Haerens et al., 2018; Vansteenkiste et al., 2012) has identified such profiles using the overarching socialization styles. Yet, the correlates of different combinations of autonomy support and control were found to depend on the specific approach under investigation. A domineering, relative to a demanding, approach was found to yield more negative outcomes, both when perceived in isolation or in combination with either autonomy support or structure by sport athletes (Reynders et al., 2020). Thus, the observed differentiation within these styles in the circumplex model allows one to extend and refine the number of identified profiles in past work. Overall, relying on more advanced research designs and data-analytic methods future research is needed to adequately test and model the dynamic influences operating at multiple levels over time.

Finally, the circumplex model yields great promise for practice and future intervention work on need-supportive socialization. Recent intervention studies in the contexts of education

(e.g., Cheon, Reeve, & Vansteenkiste, 2020), sport (e.g., Reynders et al., 2019) and work (e.g., Jungert et al., 2018) have shown that socializing agents can successfully be trained to adopt more need-supportive styles and to avoid engaging in need-thwarting styles. As these studies are increasingly shifting from an exclusive focus on the malleability of autonomy support towards training socializing agents in the provision of structure as well, they would benefit from a more integrative assessment of need-supportive practices. In addition, because a reduced reliance on controlling and chaotic practices may occur as a desirable side-effect of an intervention targeting need-supportive socialization, the circumplex model offers the advantage for simultaneously assessing socializing agents' adoption of controlling and chaotic practices all at once.

From an applied perspective, the circumplex model also has great potential as an ecologically valid feedback and self-reflection instrument for socializing agents. After completing the questionnaire, socializing agents can be provided with their personalized (teaching-, coaching-, or leadership) profile and associated personalized feedback that is meant to increase the awareness about their current socialization style. In this way, the profile acts as a "compass" allowing socializing agents not only to reflect on their current use of (de)motivating practices ('Where am I today?'), but also to detect potential vulnerabilities or pitfalls in the application of need-supportive practices, thereby thus gaining insight in their potential for growth. Although socializing agents may slip into need-thwarting practices as a function of contextual pressures or the observed disengagement of those being socialized (e.g., Pelletier et al., 2002; Wuyts et al., 2017), the compass can point them in the direction to get back on track and hints towards areas where they can develop their motivating interpersonal skills.

Conclusion

The study of what makes for a (de)motivating socializing agent has rapidly grown over the past years. Studies grounded in Self-Determination Theory have not only become increasingly methodologically sophisticated, but they also have generated novel insights both at the conceptual and practical level. The recent identification of a circumplex model sheds a refreshing light on the question how different motivating and demotivating socialization styles fit together and points towards the importance of a graded or ordered approach. Although the circumplex structure is in need of replication, extension, and refinement in diverse age groups, domains and cultures, the available evidence is promising. The circumplex may serve as a source of inspiration to continue the study of need-relevant practices and serve as a guide in daily practice to help socializing agents in interacting with students, athletes, or employees in motivating ways.

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Table 1

Conceptual Definitions of the Six Socialization Styles and Description of the Eight Identified Approaches in the Circumplex Model as proposed by Aelterman et al. (2019)

Socialization Style	Conceptual definition/basic attitude	Subarea	Description
Autonomy support	The socializing agent's basic attitude represents an interpersonal tone and sentiment of ***curious interest, receptivity and flexibility***. The socializing agent seeks to maximally identify and nurture others' interests, preferences and feelings, so that they can volitionally engage themselves in activities or tasks.	Participative	A ***participative*** socializing agent identifies others' personal interests by engaging in a dialogue with them and inviting them to provide input and suggestions. In addition, where possible, the socializing agent tries to offer (meaningful) choices in how students, athletes or employees deal with activities and tasks.
		Attuning	An ***attuning*** socializing agent nurtures others' personal interests by trying to find ways to make the tasks or projects more interesting and enjoyable, accepting others' expressions of negative affect and trying to understand how they see things. The socializing agent allows others to work at their own pace and provides explanatory rationales that are personally meaningful in the eyes of their students, athletes or employees.
Structure	The socializing agent's basic attitude represents and interpersonal tone and sentiment of ***process- and progress-orientation.*** Starting from the capabilities and abilities of others, the socializing agent provides strategies, help and assistance, so that others feel competent to master activities or tasks.	Guiding	A ***guiding*** socializing agent nurtures others' progress by providing appropriate help and assistance as and when needed. The socializing agent goes through the steps that are necessary to complete a task, so that students, athletes or employees can continue independently and, if necessary, can ask questions. Together with them the socializing agent constructively reflects on mistakes, so that the students, athletes or employees see for themselves *what* can be improved and *how* they can improve.

		Clarifying	A ***clarifying*** socializing agent communicates expectations to others in a clear and transparent way. The socializing agent offers an overview of what students, athletes or employees can expect and monitors their progress in meeting the communicated expectations.
Control	The socializing agent's attitude is one of ***pressure and coercion.*** The socializing agent insists that others think, feel, and behave in a prescribed way and imposes his/her own agenda and requirements onto others, irrespective of what the latter think.	Demanding	A ***demanding*** socializing agent requires discipline from the students, athletes or employees by using powerful and commanding language to make clear what they have to do. The socializing agent points others on their duties, tolerates no participation or contradiction, and threatens with sanctions if others don't comply.
		Domineering	A ***domineering*** socializing agent exerts power to others to make them comply with his/her requests. The socializing agent suppresses others by inducing feelings of guilt and shame. While a demanding socializing agent tries to change others' thoughts, feelings, and behaviors into something more acceptable to him/her, a domineering approach is characterized by a 'personal attack' on students, athletes or employees.
Chaos	The socializing agent's attitude is one of ***laissez faire.*** The socializing agent leaves others to their own device, making it confusing for them to figure out what that they should do, how they should behave, and how they can develop their skills.	Abandoning	An ***abandoning*** socializing agent gives up on others. The socializing agent allows others to just do their own thing, because eventually they have to learn to take responsibility for their own behavior.
		Awaiting	An ***awaiting*** socializing agent offers a laissez-faire climate where the initiative fully lies with the students, athletes or employees. The socializing agent tends to wait to see how things evolve, doesn't plan too much and rather let things take their course.

Figure 1

From a Data-driven Two-Dimensional Circumplex Model (as obtained with the Situations-in-School Questionnaire in de Education Context; Aelterman et al., 2019; left) and to a Conceptual Socialization Compass (right)

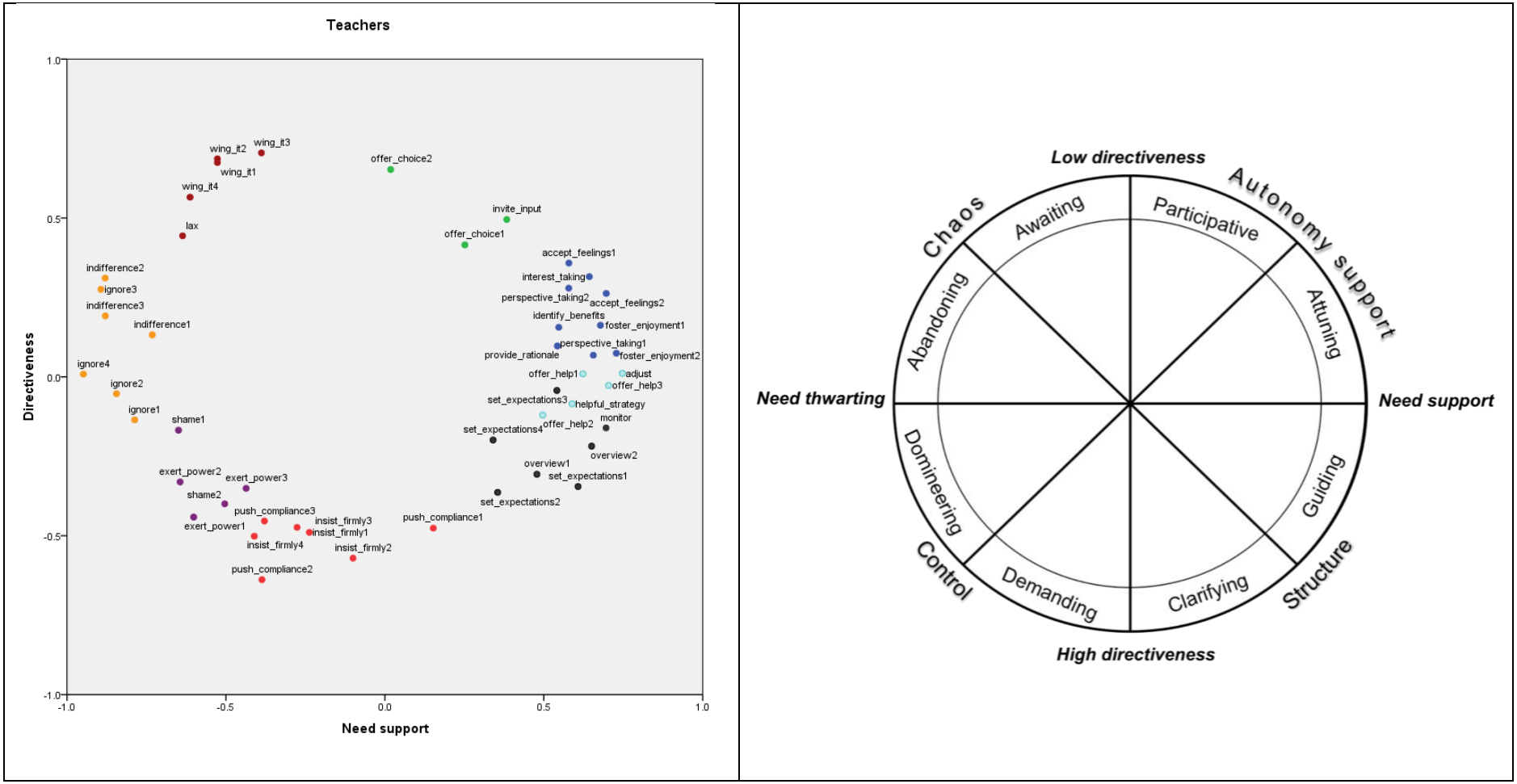
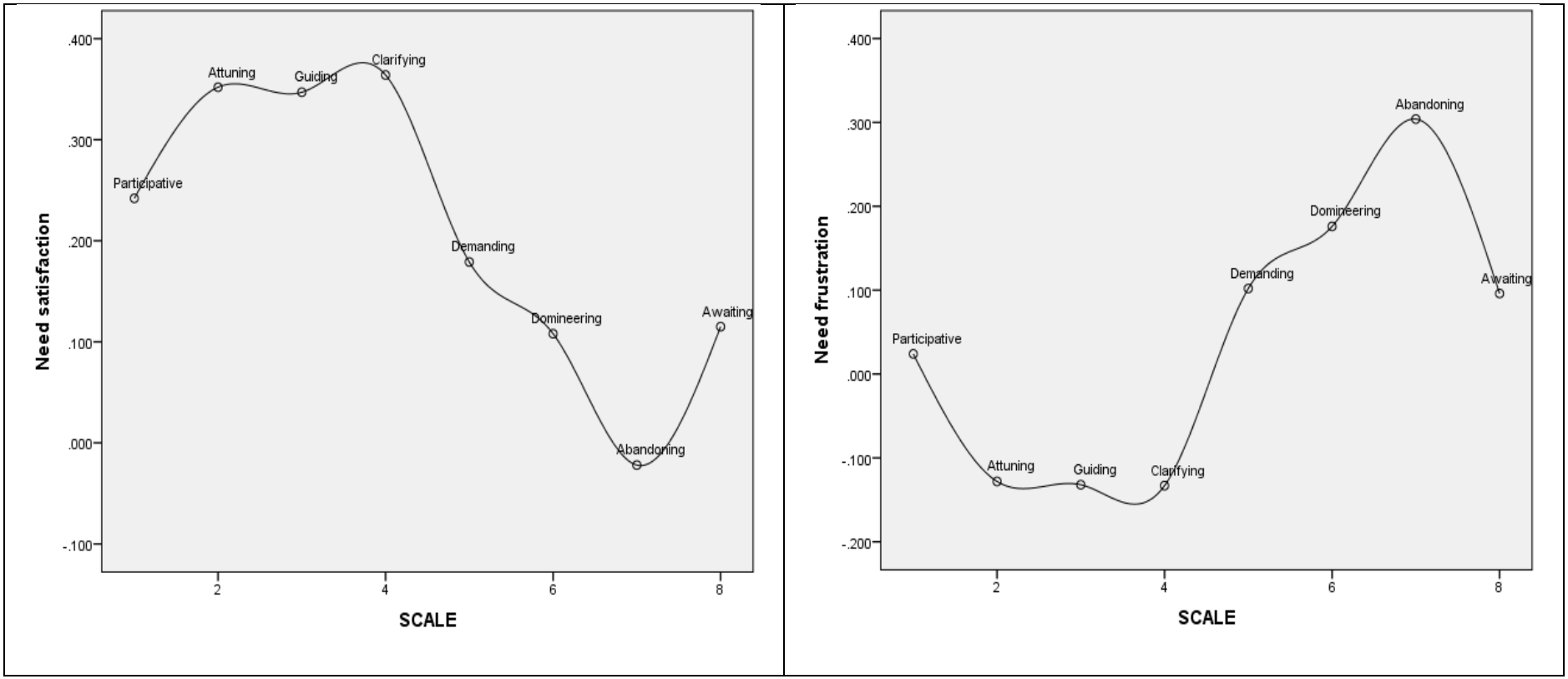
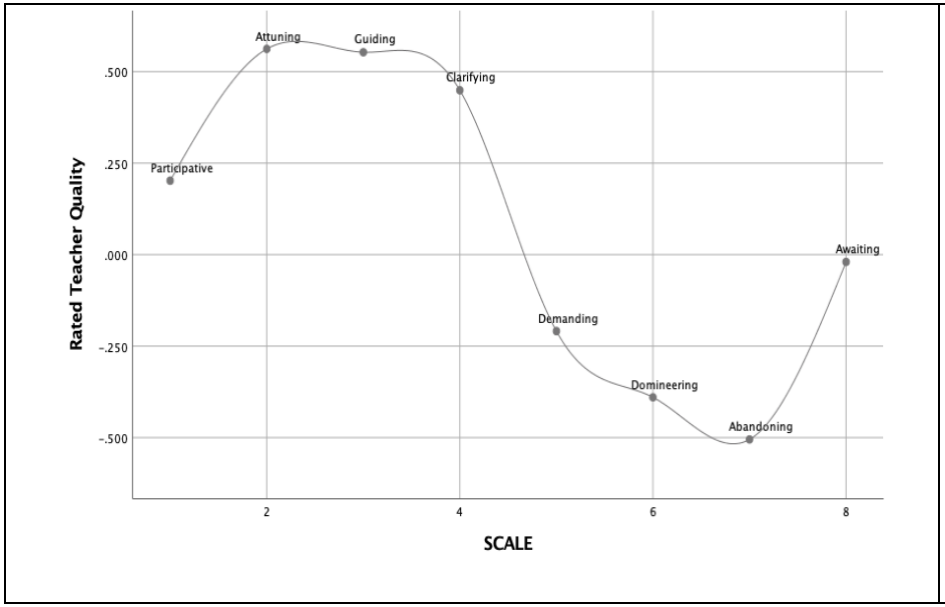
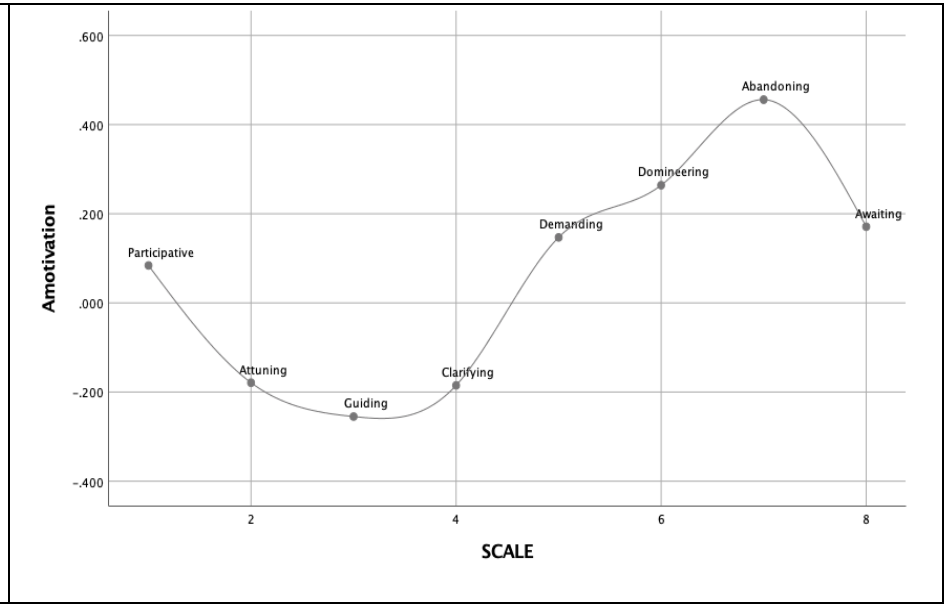


Figure 2

Examples of Sinusoid Relations between Eight Approaches in the Circumplex Model and Teacher Antecedents (e.g., Need-Based Experiences) and Student Outcomes (e.g., Rated Teacher Quality and Amotivation; Aelterman et al., 2019)




Rated Teacher Quality
.500
.250
.000
-.250
-.500
Participative
Attuning
Guiding
Clarifying
Demanding
Domineering
Abandoning
Awaiting
2
4
6
8
SCALE


Amotivation
.600
.400
.200
.000
-.200
-.400
Participative
Attuning
Guiding
Clarifying
Demanding
Domineering
Abandoning
Awaiting
2
4
6
8
SCALE