The socializing role of the problem-constraint link: A multimethod investigation

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ABSTRACT

Experimental studies on parent-youth disagreements have revealed the potential socialization advantages of favoring parental constraints with strong problem-constraint links (i.e., logical consequences) over constraints with weak problem-constraint links (e.g., mild punishments). In this study, we extended this line of research by examining the relation between youth perceptions of their parents' actual usage of constraints during disagreements and indicators of compliance and internalization. A total of 437 adolescents (M_{age} = 15.90; 53% female) completed a cross-sectional questionnaire on global parent-youth disagreements, while a subsample of 179 adolescents also completed daily diaries of situational parent-youth disagreements. Results replicated and extended those of past studies. In both designs, constraints with stronger problem-constraint links were, overall, related to higher scores on indicators of compliance and internalization. These relations were not moderated by age. Noteworthy relations were also found between covariates (e.g., harshness, autonomy-support) and outcomes. A two-step procedure to identify logical consequences is presented.

Introduction

Socialization is a lifetime process in which individuals, through their interactions with socialization agents, learn to comply with important societal rules and internalize their underlying values and norms, such that they may successfully adapt and contribute to their social group. Compliance refers to individuals' abidance with rules – that is, the degree to which they actually follow those rules. Complying with societal rules is deemed essential to one's socialization as it fosters the development of social and regulatory skills, in addition to promote harmonious relationships with socialization agents (and ensued successful socialization opportunities; Patterson & Fisher, 2002). Internalization, another key component of socialization, refers to the incorporation of societal values and norms into one's own schemas. When individuals have internalized values and norms underlying societal rules, they tend to comply with these rules for autonomous reasons (i.e., for reasons that are coherent with their sense of self; e.g., because they personally find these rules important), rather than solely for controlled reasons (i.e., for contingencies that are external to their sense of self; e.g., to avoid losing privileges; Grolnick, Deci, & Ryan, 1997). The success of individuals' socialization process is thus reflected in their aptitude to comply with societal rules as well as in their reasons for doing so.

One key interaction context found to represent a valuable opportunity but also a considerable challenge to foster these two socialization goals is the context of disagreements originating from youth rule-breaking behaviors (Smetana, 2011). This study relies on Self-Determination Theory, a theory that uses the concepts of universal needs to understand human development and socialization process, to examine how parental usage of constraints with strong problem-constraint links (i.e., of logical consequences) may promote both compliance and internalization in the challenging context of parent-youth disagreements originating from adolescent rule-breaking behaviors.

Parenting and socialization during parent-youth disagreements

Socialization is a learning process that shapes people's development across the life span, though some periods seem more decisive than others. For instance, during adolescence, youths develop cognitive abilities that allow them to reflect more elaborately on various societal rules (Smetana, 2011). By acquiring a greater understanding of societal principles and their relevance during this developmental period, youths can then make critical strides in their socialization process (see Smetana, Robinson, & Rote, 2014, for a discussion on socialization during

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adolescence). Yet, because full emotional and cognitive maturity has yet to be reached at this stage, youths remain vulnerable to faulty judgments and decision-making, such that they still highly depend on others' guidance to ensure the success of their development and socialization (e. g., Lin, 2016).

Through their interactions with their adolescents, parents play a determining guiding role in youth socialization (Smetana, 2011). Indeed, while the transition from childhood to early adolescence is generally marked by youth emerging independence from their parents and increasing amount of time spent with other socialization figures (e. g., friends), it nonetheless also tends to be accompanied by an overall increase in parent-youth discussions about socialization-related issues (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). In particular, disagreements over rules and their underlying issues become increasingly frequent during adolescence, thereby offering parents as many valuable opportunities to further youth socialization (Smetana, 2011). Disagreements between parents and youths may be defined as overt differences of opinions that vary in intensity, ranging from expression of differences of opinion to heated conflicts surrounding youth behaviors (Weymouth, Buehler, Zhou, & Henson, 2016). Studies examining the frequency of parent-child disagreements suggest that their rates typically peak during the transition from childhood to adolescence and then gradually decline throughout mid and late adolescence (Aquilino, 1997; Smetana, 2011).

During adolescence, disagreements often relate to issues that comprise both personal facets (i.e., facets beyond legitimate social regulation that are neither right nor wrong and that do not impact youth health and security) and non-personal ones (e.g., prudential, moral, and conventional facets; Smetana, 2011; Smetana & Asquith, 1994). According to scholars, such disagreements represent key socialization opportunities because they offer youths the possibility to use their developing cognitive abilities to discuss, reflect upon and negotiate divergent perspectives on societal rules or their underlying issues, thereby enabling youths (and parents) to adjust their own perspective and make necessary accommodations within their relationship for internalization to occur (Soenens, Vansteenkiste, & Van Petegem, 2015). Yet, there are also times when discussed rules may no longer be adjusted and where youths, despite parent verbal interventions, do not intend to comply and may break rules (e.g., Robichaud, Mageau, & Soenens, 2020).

In rule-breaking situations, research suggests that the socialization value of parent-youth disagreements should not only depend on parent verbal interventions, but also on parent aptitude to successfully enforce broken-rules as rule enforcement sends a strong message to youths about the importance of following the broken-rule (Baumrind, 2012). From a developmental perspective, rule enforcement (like compliance) remains necessary in adolescence as youths demonstrate a vulnerability to precarious decision-making (Lin, 2016). In line with these propositions, research shows that rule enforcement in response to disagreements originating from non-compliant youth behaviors predicts greater youth adjustment than an absence of parental intervention, and that these effects are stronger when parent-youth disagreements pertain to matters that are not solely personal (Smetana, 2011). It thus seems that in rule-breaking situations involving non-personal issues and for which initial verbal interventions have proven insufficient to induce compliance, rule-enforcement through some form of parental constraints could protect youths from situations that present significant risks to their optimal development and socialization.

Constraints

Constraints are behavioral limits imposed by authority figures on subordinates. In parent-youth interactions, examples of constraints include the removal of privileges (e.g., using one's cellphone) or the requirement to do chores (e.g., dishes). While parental constraints may promote compliance to a greater degree than the sole usage of verbal interventions (e.g., Robichaud, Mageau, & Soenens, 2020), constraints'

impact on internalization has been a subject of debate among scholars. On the one hand, scholars have proposed parent usage of constraints as a key component of an optimal parenting style – that is, one that would foster youth socialization (Baumrind, 2012). On the other hand, studies have found negative and inconsistent relations between constraints and indicators of internalization and adjustment (e.g., Gershoff et al., 2010). Notably, adding constraints to verbal interventions has sometimes been shown to respectively heighten and lower youth controlled and autonomous reasons to comply (Robichaud, Mageau, & Soenens, 2020). Hence, while constraints might play a key role in eliciting compliance, their usage may also jeopardize internalization. To better understand how parents can successfully use constraints during parent-youth disagreements, we turn to Self-Determination Theory (SDT), a theoretical framework that established the necessary conditions for optimal internalization to occur.

Self-determination theory applied to parent-youth disagreements

According to SDT, youth successful internalization of important societal principles largely depends on the extent to which youth social environment supports, rather than thwarts, their innate psychological need for autonomy (i.e., their need to feel a sense of volition and self-endorsement over their behaviors). Autonomy support (AS) refers to behaviors that are (1) supportive of youth active participation in decision-making and problem-solving, (2) informational (e.g., providing rationales for one's own perspective), and (3) empathic (e.g. acknowledging youth perspective; Mageau et al., 2015). According to SDT, parents who support their youth need for autonomy provide youths with the necessary information and psychological space for internalization to occur, which in turn facilitates youth autonomous (i.e., internalized) endorsement of key socially encouraged behaviors (Joussemet, Landry, & Koestner, 2008). In contrast, parents who thwart their youth need for autonomy pressure youths to behave, feel, and think in specific ways, thereby increasing the salience of external contingencies and preventing the necessary accommodations for thorough internalization to occur. As such, pressured youths tend to experience heightened controlled (i.e., non-internalized) reasons to comply with relevant social behaviors (Soenens & Vansteenkiste, 2010). Thus, based on SDT, it may be expected that constraints with more AS and less AT features have greater socialization value.

Problem-constraint link

One constraint feature argued to play a key role in minimizing their negative impact on youth autonomy and related internalization-hindering risks is the presence of a logical link between the *problem* created by youth rule-breaking behaviors and the *constraint* selected to address this problem (Robichaud, Lessard, Labelle, & Mageau, 2020). Parents establish such *problem-constraint link* when their constraint requires youths to address the problem created by their misbehavior (e.g., by repairing something broken), or experience the consequences of having someone address the problem for them (e.g., losing a privilege used problematically). When constraints are applied in such manner, they are called *logical consequences*.

Logical consequences could minimize constraints' negative impact on youth autonomy for several reasons. First, because constraints with strong problem-constraint links are intrinsically directed towards solving problems created by youth transgressions, they arguably present three key AS ingredients. Specifically, they (1) offer youths the possibility to *participate actively* in solving the problem created by their behavior, and (2) provide *valuable information* on the transgression-induced problems, and hence on the rule's importance (Robichaud, Lessard, et al., 2020). Also, because they rely on problem-solving to elicit compliance (rather than on aversion as typical constraints do; Dadds & Salmon, 2003), they may (3) be applied in a more *empathic* way (the third fundamental ingredient of AS) and in a less *pressuring* way (a key characteristic of AT behaviors). For instance, to solve transgression-induced problems, parents and youths may actively search together for

solutions that have minimal impacts on youth feelings and activities. These AS features, paired with the fact that logical consequences are logically linked to the transgression-induced problem (Robichaud, Mageau, & Soenens, 2020), should lead youths to perceive this parental intervention as more acceptable than other forms of constraints, which in turn should facilitate youth adherence to, and internalization of, the message underlying the parental intervention (Grusec & Goodnow, 1994).

Logical consequences have been identified as a key component of successful parenting programs (Leijten et al., 2019), though empirical research examining the specific socialization value of this strategy is scarce. In a recent series of experimental studies conducted among youths (Robichaud & Mageau, 2020; Robichaud, Mageau, & Soenens, 2020) as well as children and their mothers (Mageau et al., 2018; Robichaud, Lessard, et al., 2020), researchers have differentiated constraints based on their problem-constraint linkage and compared their socializing value. Specifically, they asked participants to read comic strips depicting mother-youth/child disagreements in which mothers, in response to youth/child persistent rule-breaking behaviors, used one of three interventions: (1) a constraint with a strong problem-constraint link (i.e., a logical consequence), (2) a constraint with a weak problem-constraint link (i.e., a mild punishment), or (3) a no-constraint intervention (e.g., AS verbalizations only). After reading each comic strip, participants rated the depicted parent intervention on indicators of compliance and internalization.

Results of these studies showed that logical consequences were evaluated as (A) at least as effective as mild punishments to elicit future compliance (i.e., more so than no-constraint interventions) and, importantly, as (B) having a similar impact on youth need for autonomy as AS verbalizations only (while mild punishments were rated as thwarting youth need for autonomy to a greater extent than AS verbalizations only). Results also showed that (C) children of all ages perceived logical consequences as the most acceptable strategy, that (D) younger youths (i.e., 15 years or younger) believed that logical consequences (vs. mild punishments) would elicit as much (vs. less) autonomous compliance than AS verbalizations (youths of 16 years and older did not anticipate that mothers' choice of intervention would influence their autonomous compliance), and that (E) youths rated their controlled compliance similarly in response to logical consequences and mild punishments (both were anticipated to elicit more controlled compliance than no-constraint interventions). Finally, results suggested that (F) the socializing role of the problem-constraint linkage was more apparent when disagreements were perceived by youths as involving non-personal issues; all constraints were evaluated rather poorly when issues were categorized by youths as personal matters. These results were observed while controlling for variables intimately tied to youth compliance and internalization, including mother AS vs. AT communication style (Mageau et al., 2018) and the harshness level of mother interventions (Pinquart, 2017). Taken together, these results suggest that the problem-constraint link may be a determining internalization-fostering constraint characteristic.

Past limitation and present study

While results from this line of research seem promising, they are also limited in that they only provide information on youth anticipated reactions to constraints with different degrees of problem-constraint linkage. This limitation is important to consider, for the restraining aspect of constraints may be more salient to youths in real-life settings than while reading hypothetical scenarios, such that observed differences between actual constraints with strong and weak problem-constraint links would be mitigated. Alternatively, youths may perceive constraints with no link to the problem created by their behavior as even more unacceptable when actually undergoing them, thereby heightening the previously observed socializing advantages of logical consequences in real-life.

Furthermore, a thorough examination of developmental issues in youth appraisal of constraints with varied problem-constraint links has yet to be conducted. As previously mentioned, the nature of parent-youth relationships evolves throughout adolescence, with youths increasingly claiming independence from their parents and questioning the legitimacy of parental jurisdiction as they grow older (Aquilino, 1997; Smetana & Asquith, 1994). As such, one could expect that older youth heightened claim for personal jurisdiction over their behaviors would lead them to perceive all forms of constraints as equally autonomy-thwarting and unacceptable, thereby making the problem-constraint link irrelevant to their internalization process. Oppositely, one could hypothesize that such heightened susceptibility to appraise parental constraints negatively would render older youths more sensitive to the quality of constraints, thereby making the presence of a strong problem-constraint link more relevant to their socialization process than for younger youths. Thus far, however, studies have generally supported the socialization value of the problem-constraint link throughout childhood (Mageau et al., 2018; Robichaud, Lessard, et al., 2020) and adolescence (Robichaud & Mageau, 2020; Robichaud, Mageau, & Soenens, 2020).

Primary objective

In order to address the aforementioned limitations, we examined the socialization role of logical consequences, but this time in real-life settings and while considering developmental issues more closely. Our primary objective was to evaluate youth perceptions of the problem-constraint linkage in their parents' actual usage of constraints during disagreements and examine whether such perceptions could predict youth compliance and internalization. To assess compliance, we examined the prevalence of parent-youth disagreements originating from youth behaviors. To assess internalization, we measured youth reasons to comply with parent rules (i.e., autonomous and controlled; Grolnick et al., 1997) and their acceptability beliefs regarding parent interventions (Grusec & Goodnow, 1994).

To enhance the quality of our methodology and ensued validity of our findings, we used a multimethod design. Specifically, we examined the socializing role of logical consequences at two complementary levels of generality (i.e., at global and situational levels). We chose this methodological approach because, in addition to offering an opportunity to replicate and extend past results twice, it has the advantage of providing information on the extent to which socialization outcomes may be similarly predicted by parent global and situational use of logical consequences.

To further specify the role of logical consequences, we also controlled for variables known to affect the socialization value of parent interventions, namely (1) parent AS vs. AT communication style (Mageau et al., 2015, 2) parent intervention harshness level (Pinquart, 2017), and (3) the type of issue underlying parent-youth disagreements (i.e., personal vs. non-personal; Smetana, 2011). We also aimed to distinguish the quality of parent constraints (i.e., in terms of their problem-constraint linkage) from their quantity by controlling for the frequency of parent usage of constraints. Finally, we took into consideration the potential role of youth and parent gender in youth apprehension of parent interventions.

We hypothesized that the previously observed socializing advantages of logical consequences would be at least as apparent in real-life settings. Specifically, we expected that while controlling for the aforementioned covariates, the more youths globally and situationally perceived parent constraints as characterized by strong problem-constraint links (i.e., as logical consequences), (1) the fewer (or at worst equal amounts of) parent-youth disagreements originating from their behaviors they would report. We also hypothesized that they would report (2) higher acceptability beliefs regarding their parent intervention and (3) more autonomous reasons to comply. No difference in controlled compliance was expected.

Secondary objective

For our secondary objective, we investigated whether the observed relations differed according to youth age. Based on past research, we hypothesized that any observed moderation effect of age would reveal stronger relations between the problem-constraint link and youth socialization outcomes for younger adolescents, compared to older adolescents.

Method

Participants

We targeted high school (80.40%) and college (19.60%) students still living with their parents and recruited a sample of 437 adolescents (M = 15.91 years, SD = 1.20 years; 52.60% girls). All youths completed a cross-sectional questionnaire, while a subsample (n = 179) also accepted to complete diaries of their daily interactions with their parents.[1] Adolescents were mostly aged between 14 and 17 years (91.30%), with the rest being either 18 (5.03%), 19 (2.29%) or 20 (1.37%) years old. Most of them were born in Canada (70%); the remainder originated from Maghreb countries (8.29%) or one of more than 35 other countries around the globe (less than 2.30% of youths per country). In contrast, a little less than two fifths (37.95%) of their parents were born in Canada, the others being born in Maghreb countries (16.80%), Haiti (6.3%) or one of more than 50 other countries (less than 2.95% per country). Approximately half of parents had a university diploma as their highest certification (54.15%); the rest had another post-secondary certification (22.05%), had their high school diploma only (20.10%), or had not finished high school (3.75%). When prompted, the majority of adolescents targeted their mother as the parent with whom they interact the most (75.80%); the rest targeted their father as their primary caregiver. Detailed sociodemographic information on our participants according to questionnaire completion is available in supplemental material online.

Procedure

Prior to conducting our research, we obtained ethical approval from the ethical committees of our university and of participants' high schools and colleges. We met participants in their classroom to explain the objectives and procedure of our questionnaire-based study. We also gave them an information letter to notify their parents about their participation in the study. We then met all participants a second time in class so that they could complete the cross-sectional questionnaire and indicate whether they also accepted to complete the diary questionnaires.

Both the cross-sectional and diary questionnaires assessed youth perceptions of the disagreements they have with their parents and that originate from their behaviors. In both questionnaires, youths answered questions while thinking about the parent with whom they interact the most often (from now on referred to as the *targeted parent*). Following the lead of past studies (e.g., Montemayor & Hanson, 1985), we used broad definitions of disagreements and constraints in our questionnaires so that our measurements would also capture their subtler forms. Precisely, we defined disagreements as "youth behaviors with which targeted parents disagree and that create an exchange, a discussion or a conflict", and defined constraints as "actions took by targeted parents so that youths don't repeat the behavior that created the disagreement (e.g., giving a consequence)."

In the cross-sectional questionnaire, we asked youths to report on their disagreements with their parents from a global perspective.

Specifically, youths estimated (1) the global prevalence of disagreements originating from their behaviors they have with their targeted parent, (2) how often these disagreements pertain to personal issues (1 = *Almost never* to 7 = *Almost always*), (3) how often their targeted parent responds by using constraints (1 = *Almost never* to 7 = *Almost always*), (4) how often these constraints are characterized by strong problem-constraint links (i.e., are logical consequences; 1 = *Almost never* to 7 = *Almost always*), and (5) how harsh their targeted parent's interventions tend to be (1 = *Not at all* to 7 = *Extremely*). Youths also reported on their global reactions to their targeted parent's interventions in terms of (6) acceptability beliefs (1 = *Not at all* to 7 = *Extremely*) and (7) reasons to comply (i.e., autonomous and controlled; 1 = *Almost never* to 7 = *Almost always*). Finally, youths evaluated their targeted parent's global tendency to (8) generally communicate in an AS vs. AT way (1 = *Almost never* to 7 = *Almost always*; see next section for detailed information on these global measures).

In the daily diaries, we asked youths to fill out a shorter and situational version of the cross-sectional questionnaire on a daily basis and over a 15-day period. More precisely, each evening, youths received an email with a link to a daily questionnaire. In this questionnaire, youths first indicated (1) whether a disagreement originating from their behaviors had occurred between them and their targeted parent during that day or not. When a disagreement occurred, youths specified if (2) the issue underlying that disagreement was personal or not, and if (3) their targeted parent had responded with a constraint or not. If a constraint had been used, youths reported on (4) how strong was that constraint's problem-constraint link (1 = *Not at all* to 7 = *Extremely*), (5) how harsh was their targeted parent's overall intervention (1 = *Not at all* to 7 = *Extremely*), (6) how acceptable was their targeted parent's overall intervention (1 = *Not at all* to 7 = *Extremely*), and (7) how autonomous and controlled were the reasons that led them to comply with the requested behavioral change (1 = *Not at all* to 7 = *Extremely*; see next section for detailed information on these situational measures). Following ethical committees' recommendations, we offered a CAN$25 compensation to participants who also completed the diary questionnaires.

Measures

Prevalence of parent-youth disagreements

To obtain an indicator of compliance, we assessed the prevalence of parent-youth disagreements originating from youth behaviors. To do so, we used three complementary measurements.

Global estimate of disagreements

First, in the cross-sectional questionnaire, we asked youths to estimate the global prevalence of disagreements they have with their targeted parent and that originate from their behaviors. Specifically, we asked youths to estimate "in general, how often [they] behave in a way that [their targeted parent] disagreed with and that creates exchanges, discussions or conflicts between [them]." Youths answered this question by estimating the number of disagreements per a period of time of their own choosing (e.g., day, week, month).

Situational report of disagreements

Second, in the diary questionnaires, we obtained a situational report of the prevalence of disagreements by asking participants to indicate each evening of the 15-day period whether a disagreement originating from their behaviors had occurred with their targeted parent that day. Specifically, and using a yes or no response scale, we asked adolescents the following question: "Today, did you behave in a way that your [targeted] parent disagreed with and that created an exchange, discussion or conflict between the two of you?". We then divided the number of "yes" responses to this question by the number of completed daily diaries. This created a score ranging from 0 to 1, where 0 implies no reported parent-youth disagreement originating from youth behaviors

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[1] Another subsample of these participants (N = 214) was part of a larger study on parenting and, as such, took part in other studies using different methodological designs and variables (see Robichaud & Mageau, 2020; Robichaud, Mageau, & Soenens, 2020).

during the 15-day period and 1 implies the occurrence of at least one disagreement per day. Scores in between these two extremes represent proportions of days during the 15-day period in which at least one disagreement occurred.

Disagreement the day following a constraint

Finally, we also used the diary questionnaires to examine whether youths reported a disagreement the day following parent situational usage of a constraint. This prospective measure allowed us to assess the short-term effectiveness of constraints with different degrees of problem-constraint linkage to prompt compliance.

Type of issue underlying disagreements

In addition to assessing the prevalence of parent-youth disagreements originating from youth behaviors, we examined youth perceptions of the type of issue underlying these disagreements (i.e., personal vs. non-personal). Specifically, we asked youths to estimate the extent to which the following statement was true using a 7-point scale (1 = *Almost never* to 7 = *Almost always*): "In general, the behaviors I have that create exchanges, discussions or conflicts with my [targeted] parent are not issues of right or wrong – they are up to me". Higher scores on this scale imply that youths perceive that, globally, the issues underlying the disagreements with their parents are more often personal matters (Smetana & Asquith, 1994).

In the diary questionnaires, on days where their targeted parent had responded with a constraint to a disagreement originating from one of their behavior, youths indicated which of the three following statements best described that behavior: (A) always wrong, whether or not my [targeted] parent says so, (B) wrong only if my [targeted] parent says so, or (C) not an issue of right or wrong – it is up to me to do what I want. Categorizing the behavior in (A) or (B) implies that youths perceived the issue underlying the disagreement as non-personal. Categorizing it in (C) indicates that they perceived it as a personal matter (Smetana & Asquith, 1994). To include this variable in our analyses, we dichotomized it so that a score of 1 (vs. 0) would mean that youths perceived the issue as personal (vs. non-personal).

Frequency of constraints

We also evaluated parent tendency to use constraints during disagreements originating from youth behaviors. In the cross-sectional questionnaire, we asked youths to rate, using a 7-point scale (1 = *Almost never* to 7 = *Almost always*), how often the following statement was true: "In general, when my behaviors create exchanges, discussions or conflicts [between me and my targeted parent], my parent takes action so that I don't reproduce these behaviors (e.g., by giving me a consequence)." Higher scores on this scale imply that youths perceive that, globally, their targeted parent tends to respond with constraints more frequently.

In the diary questionnaires, on days where they reported the occurrence of a parent-youth disagreement originating from their behaviors, youths indicated if the following statement was true or not: "My [targeted] parent took action so that I would not reproduce that behavior (e.g., by giving me a consequence)." Indicating that this statement is true implies that a constraint was used.

Problem-constraint link

To examine the socializing role of constraints, we assessed their problem-constraint link. In the cross-sectional questionnaire, we asked youths to indicate how globally often constraints used by their targeted parent had a strong problem-constraint link (i.e., were logical consequences). Specifically, and based on past studies examining the problem-constraint link (e.g., Robichaud, Mageau, & Soenens, 2020), youths evaluated how often their targeted parent constraints (1) "were logically related to their (youth) behaviors", (2) "stemmed directly from their (youth) behaviors", and (3) "allowed to address the problems created by their (youth) behaviors", using a 7-point scale (1 = *Almost*

never to 7 = *Almost always*).

In the diary questionnaires, we used the same three items to assess the problem-constraint link but adapted them to a situational setting. More precisely, on days where targeted parents used a constraint, we asked youths to indicate the strength of its problem-constraint link, using a 7-point scale (1 = *Not at all* to 7 = *Extremely*). Reliability coefficients of this 3-item scale were satisfactory both in the cross-sectional (α = 0.77) and the diary questionnaires ($\alpha_{\text{averaged item scores}}$ = 0.81).

Intervention harshness

We also assessed the harshness level of targeted parent interventions during parent-youth disagreements originating from youth behaviors. Specifically, based on a study that controlled for parent intervention harshness in a similar setting (i.e., Robichaud & Mageau, 2020), we asked youths to indicate the extent to which targeted parent interventions during these disagreements were (1) "harsh", (2) "severe", and (3) "unpleasant", using a 7-point scale (1 = *Not at all* to 7 = *Extremely*).

In the cross-sectional questionnaire, youths indicated the global harshness level of targeted parent interventions during disagreements. In the diary questionnaire, on days where their targeted parent used a constraint during a disagreement, adolescents rated the harshness level of targeted parent situational intervention. Reliability coefficients of this scale were satisfactory in both the cross-sectional (α = 0.81) and diary questionnaires ($\alpha_{\text{averaged item scores}}$ = 0.82).

Acceptability beliefs

To obtain a first indication of the relation between the problem-constraint link and youth internalization process, we asked participants to report on their acceptability beliefs regarding targeted parent interventions during disagreements originating from their behaviors (Robichaud, Mageau, & Soenens, 2020). Specifically, youths indicated the extent to which targeted parent interventions were "acceptable", using a 7-point scale (1 = *Not at all* to 7 = *Extremely*).

In the cross-sectional questionnaire, youths indicated the extent to which they believed that, globally, targeted parent interventions during disagreements were acceptable. In the diary questionnaire, youths rated their acceptability beliefs regarding targeted parent interventions on days where their targeted parent used a constraint during a disagreement.

Reasons to comply

To obtain further information on the relation between the problem-constraint link and internalization, we asked youths to indicate the reasons that lead them to comply with the rules over which parent-youth disagreements occur. To do so, we used the *Self-Regulation Questionnaire* adapted to rule-breaking settings (Soenens, Vansteenkiste, & Niemiec, 2009).

In the cross-sectional questionnaire, youths indicated on a 7-point scale (1 = *Almost never* to 7 = *Almost always*) how globally often, following targeted parent interventions, their reasons to comply with rules over which parent-youth disagreements occur are autonomous and controlled. Autonomous compliance was assessed using the four items of the identified regulation subscale (e.g., "because I understand why these rules are important"), while controlled compliance was assessed using the four items of the external regulation subscale (e.g., "because I would be afraid to lose the privileges my [targeted] parent gives me"). The validity of these subscales is demonstrated by theoretically concordant relations with other indicators of internalization (Soenens et al., 2009). The reliability coefficients of the autonomous (α = 0.90) and controlled (α = 0.80) compliance measures were satisfactory.

In the diary questionnaires, on days when targeted parents used a constraint during a disagreement, youths rated on a 7-point scale (1 = *Do not agree at all* to 7 = *Very strongly agree*) the extent to which, following their targeted parent intervention, they had complied with the rule that had created the disagreement for autonomous and controlled

reasons. In this questionnaire, autonomous and controlled compliance were assessed with single-item subscales found to be sensitive to differences in the problem-constraint link in another study (Robichaud, Mageau, & Soenens, 2020). The autonomous compliance item was "I followed the rule of my own free will because I believed it to be important". The controlled compliance item was "I followed the rule because otherwise, I would have been afraid to lose the privileges that my parent is giving me".

AS vs. AT communication style

To control for targeted parent general AS vs. AT communication style, we asked youths to fill out the *Perceived Parental Autonomy Support Scale* (P-PASS; Mageau et al., 2015) as part of the cross-sectional questionnaire. This validated 24-item questionnaire assesses the extent to which parents globally behave in an AS way, namely by (1) providing rationales for demands and limits, (2) encouraging volition within set limits, and (3) acknowledging youth perspective. It also assessed the extent to which parents avoid using AT behaviors (i.e., threats of punishments, performance pressures and guilt-inducing criticisms). For parsimony purposes, we calculated a single composite score of parent AS vs. AT communication style. Its underlying reliability coefficient was excellent ($\alpha = 0.94$).

Plan of analyses

Given our multimethod assessment of the problem-constraint link and socialization variables, we performed one set of primary analyses per level of generality. We conducted preliminary analyses for both cross-sectional and diary data prior to performing the two sets of primary analyses, so that we could (1) use all cross-sectional data as well as the situational report of parent-youth disagreements from the diary data for our primary analyses at the global level, and (2) use the remaining diary data and some covariates from the cross-sectional data (i.e., parent AS vs. AT communication style, parent global tendency to use constraints, and sociodemographics) for our primary analyses at the situational level.

Preliminary analyses

For our preliminary analyses, we first examined the descriptive statistics of youth global estimates and situational reports of (1) parent-youth disagreements originating from their behaviors and (2) targeted parent usage of constraints. We then analyzed missing data and variable distributions at each level of generality.

At the global level, we estimated all missing values for our cross-sectional data and for youth situational reports of parent-youth disagreements. To do so, we used the EM algorithm with the ML estimator and created 20 data sets, which we then aggregated into a single one. Afterwards, we ensured that our continuous variables were normally distributed (i.e., skewness $< |2|$, kurtosis $< |7|$) and that sufficient variation occurred for our dichotomic variables (i.e., frequency ratio inferior to 90:10). Finally, we examined the correlations between the variables.

At the situational level, we used multilevel statistics to handle missing values of all diary data (with the exception of youth situational reports of disagreements, which was not used for this set of analyses). After verifying the distribution and variability of all our variables, we examined their correlations using multilevel analyses (which allowed us to estimate standardized beta coefficients for each individual pair of variables).

Primary analyses

We performed all primary (and secondary) analyses on Mplus 8.0 using the maximum likelihood robust (MLR) estimator (and Montecarlo integration to analyze categorical and continuous outcomes

concomitantly; Muthen & Muthen, 2017). We chose the MLR estimator because it is robust to deviations of normality, thereby allowing us to use more liberal cut-off scores for normality without risking compromising the validity of our results. At the global level, we used structural equation modeling (SEM) to examine the relations between youth global perceptions of the problem-constraint link and their (1) global estimates and situational reports of the prevalence of parent-youth disagreements originating from their behaviors, (2) global acceptability beliefs regarding targeted parent interventions during such disagreements, and (3) typical reasons to comply with the rules underlying such disagreements (i.e., autonomous and controlled). We assessed these relations while controlling for youth global perceptions of (A) the tendency of the issues underlying such disagreements to be personal matters, (B) the harshness level of targeted parent interventions during such disagreements, (C) targeted parent tendency to respond with constraints during such disagreements, and (D) targeted parent AS vs. AT communication style. We also controlled for (E) youth and targeted parent gender. To take into account potential interaction effects, we first tested all interactions between the covariates and the problem-constraint link on socialization outcomes and then pursued our analyses accordingly.

At the situational level, we performed multivariate multilevel analyses to estimate the relation between youth perceptions of the problem-constraint link on days where their targeted parent used a constraint during a disagreement and (1) the occurrence of a disagreement the following day, (2) youth acceptance of targeted parent intervention during the disagreement, and (3) youth reasons to comply with targeted parent rules after the disagreement (i.e., autonomous and controlled). We assessed these relations while examining the same interaction effects and controlling for the same set of covariates as for our analyses at the global level, but this time using situational assessments of (A) the type of issue underlying the disagreement (i.e., personal vs. non-personal) and (B) targeted parent intervention harshness level.

If *sufficient* instances of constraints occurred in the diary data (and ensued within-person level variation of the problem-constraint linkage), we intended to analyze the aforementioned relations at both within- and between-person levels, thereby allowing us to examine (1) whether daily fluctuations of the problem-constraint linkage within an adolescent could predict daily fluctuations of the assessed socialization outcomes within that same adolescent (within-person level of analyses), and (2) whether variations between youth "average" rating of the problem-constraint link over the 15 days could predict variations between youth "average" rating of the assessed socialization outcomes (between-person level analyses). If *insufficient* instances of constraints occurred, we intended to analyze the aforementioned relations at the between-person level only, but still use multilevel analyses so that score dependencies related to within-personal level variation could be controlled for (Muthen & Muthen, 2017). Multilevel analyses control for score dependencies by treating each youth (and underlying repeated-measures scores) as one cluster, rather than treating each repeated-measures score as a separate cluster (Hox, Moerbeek, & Van de Schoot, 2017).

Secondary analyses

For our secondary analyses, we tested whether the observed main and simple effects of our primary analyses varied according to youth age. To do so, we reran the final models of our primary analyses at both levels of generality, this time including age as a moderator.

Results

Preliminary analyses

Missing data and normality

Examining our cross-sectional data revealed that 5.72% or less of the data were missing per variable ($M = 3.18\%$, $SD = 1.08\%$). Conducting

the Little's MCAR test for this data (while also including youth situational reports of disagreements, which was missing for the 258 youths who had not completed the diary questionnaires), suggested that data were not missing completely at random, $\chi^2(424) = 533.77$, $p < .001$. This confirmed our choice of imputing missing data.

Looking at the normality of our cross-sectional data (after imputation) revealed that all continuous variables were normally distributed (skewness $\leq |0.90|$, kurtoses $\leq |1.20|$), with the exception of both disagreement variables whose distributions suggested minimal occurrences of disagreements for a large majority of youths and several instances of disagreements for a small minority of youths. Specifically, youth situational reports of disagreements over the 15-day period were slightly non-normal, yet still within the cut-off scores (skewness $=1.29$; kurtosis $= 3.95$), while youth global estimates of disagreements were severely non-normal (skewness $= 5.11$; kurtosis $= 36.86$). To address the non-normality issue of youth global estimates of disagreements, we dummy coded this variable before including it in our primary analyses. Specifically, we split the variable at the median and attributed a score of 0 (vs. 1) to youths who globally estimated the fewer (vs. most) disagreements with their targeted parents. Finally, we observed that all dichotomic variables included in our primary analyses had sufficient participants per category to be analyzed (ratio $\leq$ 75:25).

Regarding our diary data, all continuous variables were normally distributed (kurtosis $\leq |1.00|$, skewness $\leq |0.59|$). All dichotomic variables also varied sufficiently to be included in the primary analyses (all ratios $\leq$75:25).

Descriptive statistics of youth global estimates and situational reports of disagreements

Our cross-sectional data provide information on youth global estimates of the prevalence of parent-youth disagreements originating from their behaviors. Descriptive statistics revealed that a near third of youths (31.40%) estimated having one disagreement or less per week with their targeted parents. Another near third (29.70%) estimated having one disagreement or more per day (with 8.60% reporting one disagreement per day, 14.00% reporting two, and 7.10% reporting three or more). The remaining 38.90% reported more than one disagreement per week, but less than once a day. The mean score on this variable (i.e., 1 disagreement every 1.16 days) differed notably from its median score (i.e., 1 disagreement every 2.80 days).

Youth situational reports of parent-youth disagreements originating from their behaviors over the 15-day period suggested a lower prevalence. In total, youths filled out 1201 of the 2685 diaries (179 youths $\times$ 15 days), for a completion rate of 44.73%. In these 1201 diaries, youths reported 213 instances of disagreements. Descriptive statistics of these reported disagreements revealed that about half of youths (i.e., 54.75%) reported one disagreement or less per week with their targeted parents over the 15-day period, with 36.31% reporting none. Among the 45.25% of youths reporting more than one disagreement on average per week, 6.70% reported the occurrence of a disagreement each day they answered. On average, youths reported having 1 disagreement per 4.73 days (which was estimated at 1 disagreement per 4.42 days with MLR).

Descriptive statistics of youth global estimates and situational reports of constraints

With regards to the prevalence of targeted parent constraints during disagreements, cross-sectional data revealed that, in general, youths estimated that their targeted parents used constraints "half of the time" in these situations ($M = 3.97$, $SD = 2.02$). Youth situational report of constraints over the 15-day period suggested a lower prevalence; among the 213 reported disagreements, youths reported 58 instances of constraints, for a prevalence rate of 27.23%.

Examining more in depth these 58 instances of constraints revealed that they were reported by a total of 42 youths, among which 10

reported more than one instance of constraint. Out of these 10 youths, 4 gave a different score on the problem-constraint link scale. The total number of participants having received a constraint (and the underlying within-person variation of the problem-constraint linkage) being too small to be analyzed, we conducted our multilevel analyses at the between-level only such that each youth (and underlying repeated ratings of the same variables) would be treated as one cluster. Tables 1 and 2 presents the means and standard deviations of the variables used for our analyses at both levels of generality.

Relations between variables

Tables 1 and 2 also presents the correlations between the variables of interest. Focusing on the parenting variables, correlations revealed that, at both levels of generality, the tendency of targeted parent constraints to have a strong problem-constraint link (i.e., to be logical consequences) and targeted parent intervention harshness were associated in opposite directions with the same socialization outcomes (with the exception of controlled compliance which was only associated with harshness). They were also related in opposite directions to targeted parent AS vs. AT communication style at both levels of generality, with parents adopting a more AS vs. AT communication style intervening less harshly and using constraints more often under the form of logical consequences. At the global level, the problem-constraint link and intervention harshness were not related to one another, suggesting that the global tendency of targeted parent constraints to be characterized by a strong problem-constraint link does not affect youth perceptions of parent intervention harshness. At the situational level, however, they negatively correlated with one another, suggesting that on days constraints are experienced, constraints with stronger problem-constraint links tend to be perceived as less harsh.

With regards to youth age, significant relations were observed at the global level. Specifically, older youths rated their targeted parent as communicating in a more AS vs. AT style and as using constraints less frequently. They also considered the issues underlying their parent-youth disagreements as personal matters more often. Finally, they reported less controlled compliance. No significant relation with age was observed at the situational level, however.

Primary analyses

Global level

At the global level, SEM showed no significant interaction between the problem-constraint link and the covariates on socialization outcomes, all *ps* $\geq$ *0*.070. We thus proceeded with the examination of main effects only.

Results, which are presented in Table 3, revealed significant relations between the problem-constraint link and socialization outcomes at the global level. Specifically, while controlling for all aforementioned covariates and their associations with socialization outcomes, the more youths globally perceived targeted parent usage of constraints as being frequently characterized by strong problem-constraint links (i.e., as logical consequences), (A) the lower were their global estimates of parent-youth disagreements, $\beta = -0.12$, $p = .031$, as well as their situational reports of disagreements over the 15-day period, $\beta = -0.16$, $p = .002$, (B) the more globally acceptable were their beliefs regarding targeted parent interventions, $\beta = 0.28$, $p < .001$, and (C) the more global autonomous compliance they reported, $\beta = 0.32$, $p < .001$. No significant relation was observed with (D) global controlled compliance, $p = .874$.

Situational level

At the situational level, multivariate multilevel analyses revealed one significant interaction between the problem-constraint link and the covariates, all other *ps* $\geq$ *0*.137. This interaction involved youth gender and situational controlled compliance, $\beta = -0.49$, $p < .001$. Consequently, we examined the main effects of the problem-constraint link on

Table 1

Means, standard deviations and correlations among variables used in the analyses at the global level.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Problem-constraint link	4.04	1.43												
2. Intervention harshness	4.16	1.48	0.04											
3. AS vs. AT communication style	4.70	1.20	0.29*	−0.47*										
4. Frequency of personal issues	3.97	2.02	−0.10*	0.09†	−0.03									
5. Frequency of constraints	3.97	2.02	0.14*	0.44*	−0.34*	−0.07								
5. Global estimates of disagreements	0.50	0.50	−0.12*	0.28*	−0.22*	0.09†	0.12*							
7. Situational reports of disagreements	0.27	0.19	−0.18*	0.16*	−0.17*	0.24*	−0.04	0.24*						
8. Acceptability beliefs	4.37	1.53	0.34*	−0.47*	0.48*	−0.10*	−0.21*	−0.22*	−0.03					
9. Autonomous compliance	4.23	1.63	0.42*	−0.39*	0.51*	−0.14*	−0.11*	−0.31*	−0.18*	0.56*				
10. Controlled compliance	3.95	1.65	−0.04	0.53*	−0.51*	0.05	0.47*	0.20*	0.07	−0.37*	−0.40*			
11. Primary caregiver 0 = Father; 1 = Mother	0.76	0.43	−0.07	0.02	−0.01	0.05	0.02	0.05	0.07	−0.06	−0.07	0.01		
12. Youth age	15.91	1.19	0.04	−0.07	0.12*	0.20*	−0.17*	0.00	−0.01	0.04	0.04	−0.11*	0.02	
13. Youth gender 0 = Girls; 1 = Boys	0.47	0.50	0.06	−0.02	0.01	−0.04	0.02	0.02	0.09†	0.11*	0.07	0.00	−0.08†	−0.06

Note. $^†p < .10$; $^*p < .05$.

Table 2

Means, standard deviations and standardized beta coefficients among all variables used in the analyses at the situational level.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Problem-constraint link	3.68	1.47											
2. Intervention harshness	3.64	1.66	−0.28*										
3. AS vs. AT communication style	4.66	1.32	0.32*	−0.28*									
4. Personal (vs. non-personal) issue 0 = Non-personal; 1 = Personal	0.33	0.47	−0.38*	0.08	−0.32*								
5. Frequency of constraints	3.94	2.04	−0.05	0.26*	−0.41*	0.06							
6. Disagreement the day following a constraint 0 = No disagreement; 1 = Disagreement	0.23	0.42	−0.22*	0.12*	−0.14	0.16	−0.04						
7. Acceptability beliefs	3.61	1.76	0.61*	−0.55*	0.58*	−0.30*	−0.12	−0.40*					
8. Autonomous compliance	2.98	1.72	0.42*	−0.27*	0.34*	−0.26*	0.03	−0.35*	0.54*				
9. Controlled compliance	2.93	2.00	0.01	0.16*	−0.34*	0.06	0.26*	−0.41*	−0.12*	−0.23†			
10. Primary caregiver 0 = Father; 1 = Mother	0.76	0.43	0.02	−0.04	−0.05	−0.17	−0.01	0.07	0.09	−0.16	0.08		
11. Youth age	15.89	1.13	0.07	−0.08	0.10	0.01	−0.10	0.05	0.21	0.20	−0.01	−0.02	
12. Youth gender 0 = Girls; 1 = Boys.	0.34	0.47	0.11	0.04	0.07	−0.13	0.14†	−0.02	0.04	0.17	−0.08	−0.17	−0.16

Note. $^†p < .10$; $^*p < .05$.

Table 3

Standardized beta coefficients and standard errors for the primary analyses at the global level.

	Global estimates of disagreements	Situational reports of disagreements	Acceptability beliefs	Autonomous compliance	Controlled compliance
	β (SE)				
Problem-constraint link	−0.12* (−0.06)	−0.16* (0.05)	0.28* (0.04)	0.32* (0.04)	−0.01 (0.04)
Intervention harshness	0.28* (0.06)	0.12* (0.05)	−0.36* (0.05)	−0.28* (0.05)	0.28* (0.05)
AS vs. AT communication style	−0.08 (0.06)	−0.08 (0.05)	0.22* (0.05)	0.31* (0.05)	−0.29* (0.05)
Frequency of personal issues	0.06 (0.05)	0.21* (0.04)	−0.03 (0.04)	−0.06 (0.04)	0.03 (0.04)
Frequency of constraints	0.01 (0.06)	0.00 (0.05)	−0.03 (0.05)	0.06 (0.05)	0.25* (0.05)
Primary caregiver 0 = Father; 1 = Mother	0.04 (0.05)	0.08 (0.04)	−0.03 (0.04)	−0.04 (0.04)	0.00 (0.04)
Youth gender 0 = Girls; 1 = Boys	0.03 (0.05)	0.12* (0.05)	0.08* (0.04)	0.04 (0.04)	0.00 (0.04)

Note. $^†p < .10$ $^*p < .05$.

all outcomes, with the exception of controlled compliance, which we assessed for boys and girls separately.

Results revealed a similar pattern of relations between the problem-constraint link and socialization outcomes as the one observed at the global level (see Table 4). Indeed, while controlling for all aforementioned covariates, youths who perceived stronger problem-constraint links on days where their targeted parent used a constraint during a disagreement originating from their behaviors reported on these same days (A) greater acceptability beliefs, β = 0.43, p < .001, and (B) more situational autonomous compliance, β = 0.31, p = .012. Youths were also less likely to report (C) a disagreement with their targeted parent the following day, β = −0.27, p = .052, although this difference was only

Table 4

Standardized beta coefficients and standard errors for the primary analyses at the situational level.

	Disagreement the day following a constraint	Acceptability beliefs	Autonomous compliance	Controlled compliance
	β (SE)			
Problem-constraint link	−0.27† (0.13)	0.43* (0.08)	0.31* (0.12)	
				Boys: −0.36* (0.14)
				Girls: 0.38* (0.13)
Intervention harshness	0.16 (0.12)	−0.41* (0.07)	−0.20* (0.08)	0.19* (0.09)
AS vs. AT communication style	−0.06 (0.08)	0.19* (0.07)	0.11 (0.09)	−0.07 (0.11)
Personal (vs. non-personal) issue		0.02 (0.07)	0.11 (0.07)	0.11 (0.09)
0 = Non-personal; 1 = Personal	−0.10 (0.14)			
Frequency of constraints	0.00 (0.07)	0.02 (0.07)	0.11 (0.09)	0.16† (0.09)
Primary caregiver	0.12† (0.07)	0.03 (0.05)	−0.12 (0.09)	0.09 (0.08)
0 = Father; 1 = Mother				
Youth gender	−0.05 (0.08)	0.08 (0.08)	−0.20* (0.09)	0.17* (0.08)
0 = Girls; 1 = Boys				

Note. $^{†}p < .10$ $^{*}p < .05$.

on the margin of significance. As for controlled compliance, stronger problem-constraint links were associated with (D) less situational controlled compliance for boys, β = −0.36, p = .006, but more of it for girls, β = 0.38, p = .006.

Secondary analyses

At the global level, SEM revealed that youth age did not moderate the relation between the problem-constraint link and the assessed socialization outcomes, all *ps* ≥ *0*.482. Coherently, non-significant moderations were also found at the situational level, all *ps* ≥ *0*.123.

Discussion

This study aimed to further clarify the socializing role of constraints characterized by strong problem-constraint links (i.e., of logical consequences). To do so, we used a multimethod design in which we asked youths to share (at global and situational levels) their perceptions of their targeted parent's usage of constraints during disagreements that originate from their behaviors. We then examined the relations between these perceptions and indicators of compliance and internalization. To attempt to isolate the role of the problem-constraint link, we controlled for the type of issue underlying the disagreements (i.e., personal vs. non-personal), characteristics of parent interventions (i.e., harshness, AS vs. AT communication style, tendency to use constraints), as well as youth and targeted parent gender. To explore developmental issues, we examined potential interaction effects between the problem-constraint link and youth age.

Problem-constraint link and compliance

Overall, our findings provided additional empirical support in favor of the socializing role of the problem-constraint link. Regarding compliance, results at the global level showed that youths who perceived targeted parent constraints as being characterized more frequently by strong problem-constraint links also globally estimated, and situationally reported over a 15-day period, fewer disagreements originating from their behaviors. These results suggest that beyond recommending to parents that they use constraints to enforce rules when initial AS verbal interventions have proven insufficient to induce compliance (e.g., Baumrind, 2012; Mageau et al., 2018; Robichaud, Lessard, et al., 2020), parenting experts should also recommend that such constraints directly address the problems created by youth misbehaviors. Indeed, according to our results, parents favoring logical consequences facilitate youth compliance to a greater degree than parents favoring more arbitrary constraints.

Results also suggested that favoring constraints with strong problem-constraint link facilitate compliance throughout adolescence. Indeed,

although research shows that youths increasingly claim independence from their parents and question the legitimacy of parental authority over their behaviors as they grow older, youths nonetheless seemed similarly responsive to the quality of parental constraints across age; the relation between the problem-constraint link and youth global compliance was not moderated by youth age.

However, these findings and their underlying implications need to be nuanced by our results at the situational level, which suggest that the relation between the problem-constraint link and compliance may not be as systematic. Indeed, at the situational level, the problem-constraint link of targeted parent usage of constraints did not robustly predict the non-occurrence of a disagreement the next day. In fact, none of our parenting variable was successful to predict whether a disagreement would occur or not the following day. While the observed lack of a clear relation between the problem-constraint link and compliance at the situational level is coherent with results of past experimental studies (e. g., Robichaud, Mageau, & Soenens, 2020), it should nonetheless be interpreted while keeping in mind that our situational measurement of disagreements did not distinguish whether disagreements occurring the day following parental constraints were the same as the ones for which those constraints had been originally used. Thus, though constraints with stronger (vs. weaker) problem-constraint links were not clearly found to prevent more successfully the occurrence of *any* disagreement the following day, they may nonetheless prevent more effectively the reoccurrence of the specific disagreements for which they were originally used.

In a somewhat similar vein, because our situational measurement of disagreements was only assessed in a binary fashion (i.e., whether at least one disagreement occurred each day), it also remains possible that constraints with stronger problem-constraint links predict fewer overall occurrences of disagreements the following day. Future research aiming to clarify the conditions under which the problem-constraint link may (or may not) successfully prevent situational disagreements should thus assess the number of daily disagreements and their content.

Problem-constraint link and internalization

In contrast, results clearly showed that the problem-constraint link was positively associated with indicators of internalization at both global and situational levels. Precisely, we first observed a positive relation between the problem-constraint link and youth acceptability beliefs across youth age, whether assessed from a global perspective or on a daily basis. These results are important, for greater acceptance of parent interventions is considered to be a key precursor of youth disposition to adhere to, and internalize, the messages underlying these interventions (Grusec & Goodnow, 1994).

Importantly, the problem-constraint link was also positively related to youth autonomous compliance, once again at both levels of

generality. Furthermore, and in contrast with past studies, this relation was observed for youth of all ages (rather than only for those below 16), suggesting that older youth autonomous reasons to comply also vary according to the problem-constraint link in real-life settings. This constitutes a strong indication of logical consequences' internalization-fostering potential, for autonomous compliance with rules implies personal valuation of these rules and adherence to their underlying values (Soenens et al., 2009).

Different explanations for the positive relation between logical consequences and these two internalization indicators may be offered. One potential explanation is that logical consequences' logical link with transgression-induced problems facilitate youth experience and understanding of the broken-rule's importance, such that they may accept and internalize rules more easily. Another explanation stems from the observed association between the problem-constraint link and parent AS vs. AT communication style. According to SDT, the success of youth internalization process is a direct function of the extent to which youth need for autonomy is satisfied rather than thwarted during socialization encounters. Because logical consequences may (1) facilitate youth *active participation* in solving transgression-induced problems, (2) offer *experiential information* on the rule's importance, and (3) be applied *empathically*, they seem to contain key AS ingredients that could account for their positive relation with internalization outcomes. The fact that (1) parents who were rated as more autonomy supportive by their youth were also perceived as favoring logical consequences, and that (2) the problem-constraint link and parental AS vs. AT communication style yielded similar positive associations with youth autonomous compliance at the global level suggest that logical consequences could foster youth autonomy in rule-breaking situations to a greater extent than more arbitrary constraints. To obtain further empirical support to this proposition, future research using longitudinal designs could test the extent to which parental logical consequences enhance youth perceptions of autonomy and in turn predict positive socialization changes.

With regards to controlled compliance, results were equivocal. At the global level, we found no evidence of a direct relation between the problem-constraint link and youth controlled compliance. This finding is in line with results of past studies, thereby further supporting the idea that levels of controlled compliance in response to constraints are determined by other factors than the problem-constraint link. At the situational level, however, we found an unexpected interaction between gender and the problem-constraint link. Specifically, while the problem-constraint link strength was similarly associated with more autonomous reasons to comply across gender, it predicted less controlled reasons to comply for boys and more of it for girls. Given the absence of any other interaction effect between gender and the problem-constraint link in this study and in previous ones, this result should be interpreted with caution. Indeed, rather than reflecting an actual gender difference, the observed interaction may be the by-product of another mechanism at play. For instance, girls may have received constraints somewhat more often than boys over the 15-day period, which may have emphasized the controlling aspect of constraints for the former regardless of the problem-constraint link.

A two-step procedure to properly identify and apply logical consequences

In sum, our results suggest that the previously observed advantages of constraints with strong problem-constraint links are at least as much apparent in real-life settings than in hypothetical ones, and as such call for parent preferential usage of logical consequences. For parents to properly apply logical consequences (and for experts to teach parents how to do so), we recommend following a two-step procedure. First, the problem created by youth misbehavior needs to be identified. This first step is crucial, for similar behaviors may create different problems according to situational factors and parent personal values. For instance, provided that youths leave their possessions in common areas of the family home, one potential problem associated with such behavior could

be the untidiness it creates for the other family members. Another problem could be the negative family image it may offer to guests. Once the problem is identified, parents may then, as a second step, choose a constraint that require youths to actively solve the problem created by their misbehavior (e.g., putting away their left possessions prior to doing any other activity or prior to guests arriving; apologizing to siblings or guests for the untidiness) or to ensure that the problem does not reoccur (e.g., certain possessions could be confined to more remote areas of the home until youths have made it clear that they do not intend to leave them in common areas when this creates a problem).

In light of the parenting documentation on the importance of autonomy support, we recommend that parents (1) only use constraints as a last resort (and especially so if youths perceive the issue underlying the parent-youth disagreement as personal; Robichaud & Mageau, 2020). Provided that parents use a constraint, we recommend that they (2) favor those that show the most consideration for youth perspective while successfully addressing the problem identified in step 1 (Joussemet et al., 2008; Mageau et al., 2015).

The socializing role of covariates

Our results also offered noteworthy, albeit non-novel, information on the socializing role of covariates (see Tables 3 and 4). First, they revealed that, while controlling for the problem-constraint link and the other covariates, youth global and situational reports of parent intervention harshness were negatively related to all socialization outcomes. Thus, in addition to highlighting the relevance of favoring logical consequences during disagreements originating from youth behaviors, our results reiterated the importance of minimizing the harshness level of parent interventions. From an SDT perspective, harsh parental interventions should be avoided as their overtly pressuring and controlling nature risks to severely thwart youth need for autonomy and hence impede their socialization process as well as their overall adjustment. Examining harshness and the problem-constraint linkage concomitantly also allowed to show their independent relations with socialization outcomes; these two characteristics did not interact to predict youth outcomes, nor did they correlate at the global level.

Second, including AS vs. AT communication style suggested that its relation to indicators of compliance could be explained by constraint characteristics. Indeed, while negative links between parent AS vs. AT communication style and youth reports of disagreements were found in preliminary analyses, these relations were no longer significant when controlling for the other covariates. Given (1) AS vs. AT communication style's relations with intervention harshness and the problem-constraint link, and (2) relations between indicators of compliance and the two latter parent intervention characteristics, one could hypothesize that the link between AS vs. AT communication style and compliance may, at least in part, reflect the tendency of parents with a more AS vs. AT communication style to also intervene less harshly and use constraints under the form of logical consequences. In contrast, AS vs. AT communication style remained significantly related to internalization outcomes at the global level even when controlling for other parenting factors, thereby reiterating the socialization value of showing consideration for youth autonomy.

Third, incorporating parent tendency to use constraints as a covariate enabled us to distinguish the socializing role of constraints in terms of quantity and quality. In line with SDT and research on attribution, which suggests that salient external causes for behaviors (e.g., constraints) may exacerbate controlled motivations (e.g., Lepper, 1983), the present results revealed a positive relation between parent global tendency to use constraints and youth global tendency to comply with parent rules for controlled reasons. This result underscores the importance of minimizing the frequency of constraints. Indeed, even if the problem-constraint link may increase the socialization value of constraints, the mere usage of constraints is nonetheless associated with heightened controlled (non-internalized) reasons to comply.

Prevalence of disagreements and constraints

Our results also offered interesting insights into the prevalence of parent-youth disagreements in families. Indeed, while the prevalence of disagreements differed between the two reports, both nonetheless suggest that parent-youth interactions are not characterized by extensive amounts of disagreements. In both reports, only a minority of youths reported having disagreements with their parents on a daily basis (i.e., between 6.70% and 30%), and roughly half reported having less than one disagreement per week (i.e., between 40% and 55%).

Examining correlations between disagreements and age also offered noteworthy insights. First, in contrast with past literature, our results revealed no significant change in the prevalence of disagreements across adolescence (Aquilino, 1997). One potential explanation for this divergent result stems from the rather broad question we used to operationalize disagreements, which may have comprised subtler disagreements whose frequency does not necessarily change with age. Future studies aiming to examine developmental changes in the frequency of parent-youth disagreements should differentiate disagreements' intensity levels to elucidate this possibility. Second, we found that older youths seemed to consider the issues underlying parent-youth disagreements as personal matters more often. This pattern of results is in line with writings anchored in Social Domain Theory suggesting that adolescents become more likely to view the issues underlying parent-youth disagreements as entailing personal matters as they grow older, notably because they increasingly negotiate and set narrower boundaries on the issues over which their parents may legitimately intervene (Smetana, 2011).

Finally, our results provided relevant information on the prevalence of constraints during disagreements. According to our descriptive statistics, youths globally estimate that targeted parents use constraints during disagreements "half of the time" and situationally report parent usage of constraints in about one fourth (27%) of parent-youth disagreements, suggesting that parents tend to resort to other strategies to address these situations. Correlations also suggested that constraints are less prevalent for older youths than for younger youths, thereby reflecting once again the idea that parental jurisdiction over adolescent behaviors tend to decrease throughout adolescence.

Strengths, limits and future research directions

The validity of the discussed findings is enhanced by the following methodological strengths. First, we examined the role of the problem-constraint link in real-life settings and from two perspectives (i.e., global and situational), such that we could replicate and extend past findings across methodologies and levels of generality. Examining the problem-constraint link at a global level also provided evidence for a relation between the problem-constraint link and compliance, which had not been clearly observed in past experimental studies.

Second, we considered relevant covariates in our analyses. This helped specify the role of the problem-constraint link, in addition to providing relevant information on the socializing value of these predictors. Notably, we (1) distinguished the quality of parent constraints from their quantity, (2) observed the complementary socializing roles of harshness and the problem-constraint link, (3) demonstrated the independent relations between these two parent intervention characteristics, parent AS vs. AT communication style and socialization outcomes, and (4) showed that the role of the problem-constraint link seemed equivalent throughout adolescence.

Third, we anchored our study in a relevant theoretical framework (i. e., Self-Determination Theory), which offered a better understanding of the psychological processes potentially at play in the relation between constraints and socialization. Our present study's results revealed a positive relation between the problem-constraint link and parent AS vs. AT communication style, which is compatible with the proposition that logical consequences' underlying characteristics show consideration for

youth need for autonomy.

Fourth, our access to a diversified sample of youths (e.g., in terms of age, ethnicity and parental education) raised confidence in the generalizability of our findings across youths. Finally, youths were asked to choose their targeted parent, which enabled us to investigate potential differences across parent gender. Our findings rather suggest that the problem-constraint link plays a similar role across parent gender.

Although the diversity of our sample may contribute to the generalizability of our findings across youths, we could not ascertain the generalizability of our findings across informants however, for only youth perceptions were sought. This limitation would be important to address in future research. One way to address it would be to ask independent observers to code the problem-constraint linkage in anecdotes shared during parent-youth filmed discussions.

Another limit of our study relates to the small number of parent constraints reported over the 15-day period. Indeed, out of the 179 youths who completed the daily diaries, 42 (23.46%) reported the occurrence of a constraint during a disagreement, of which only 4 reported different degrees of problem-constraint linkage. While this represents valuable descriptive information on parent-youth disagreements, it limited the inferential information that could be drawn at the within-person level of analysis. Future studies could address this issue by increasing the number of daily diaries, increasing sample size and improving completion rates. This may be challenging however, as diary questionnaires tend to be taxing and attrition rates high (with most participants failing to provide answers on at least some days; Ohly, Sonnentag, Niessen, & Zapf, 2010). In our study, youths completed 44.73% of the diaries. To improve this rate in future research, participants could be sent reminders to fill out the questionnaire through multiple media (i.e., text message and email) and offered the choice to complete the daily diaries on their cellphones.

To further clarify the socializing role of the problem-constraint link, future research could also use a real-life experimental design, where participants would be led to transgress a rule (e.g., by cheating on a task) and then receive a constraint weakly or strongly related to the problem created by that transgression. This would raise confidence in the idea that the causal effects of logical consequences translate in real-life settings. Moreover, this design would offer information on the extent to which the socializing advantages of the problem-constraint link emerge in other hierarchical relationships (i.e., experimenter – participant), thereby opening the door to examining the role of logical consequences in other settings (e.g., school).

Conclusion

In sum, research suggests that the socialization value of parent-youth disagreements is intimately tied to the quality of the strategies parents adopt during these interactions. According to Self-Determination Theory, the more parents adopt strategies that enhance youth autonomy, the more they facilitate youth socialization process. While past studies highlighted the potential advantages of parental constraints characterized by strong (vs. weak) problem-constraint links on youth autonomy and socialization process, research had yet to examine the role of such logical consequences in real-life settings. This multimethod study made a step in this direction and showed that parental actual usage of logical consequences was positively associated with youth compliance and internalization as well as with a more AS vs. AT communication style. Future research is now needed to test the causal role of logical consequences in real-life settings across informants and hierarchical relationships as well as their underlying psychological mechanisms.

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