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The role of logical consequences in adolescents' cognitive precursors of compliance and internalization



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ABSTRACT

It is well established that parents' responses to adolescents' transgressions play a role in adolescents' future compliance and internalization process. However, research has yet to reach a consensus on the effectiveness of several specific authority exertion strategies. One of these strategies, which theoretically holds the potential to foster both compliance and internalization, is parental use of logical consequences. Using an experimental vignette methodology and a sample of 214 adolescents ($M_{\text{age}} = 15.28$ years), the current study compared the effects of logical consequences with classical authority exertion strategies (mild punishments, reasoning, and no authority exertion). Results showed that adolescents held favorable perceptions regarding logical consequences; they rated logical consequences as the most acceptable and, on an equal footing with mild punishments, the most effective strategy to elicit future compliance. Furthermore, whereas older adolescents did not generally anticipate that their reasons to comply would vary as a function of parents' choice of authority exertion strategies, younger adolescents anticipated that they would comply for more well-internalized reasons in response to logical consequences compared with mild punishments. Implications of these findings for the promotion of optimal parenting and future research directions are discussed.

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Introduction

In parent–youth relationships, rule-breaking situations offer parents a valuable opportunity to foster their adolescents' socialization as the way in which parents respond to transgressions plays an important role in adolescents' future compliance and internalization process. Yet, they also represent a substantial challenge given that even parenting scholars struggle to reach a consensus on the optimal authority exertion strategy, or combination of strategies, that could be used to reach these two main socialization goals (Larzelere, Cox, & Mandara, 2013; Grusec, Danyliuk, Kil, & O'Neill, 2017). More precisely, authority exertion strategies identified as promoting internalization (e.g., reasoning) have also been shown to lack effectiveness in obtaining immediate compliance (Mageau et al., 2018), whereas strategies effective at eliciting compliance (e.g., mild punishments) sometimes elicit strong negative emotions that can hamper internalization (Padilla-Walker & Carlo, 2004; Robichaud, Lessard, Labelle, & Mageau, 2019). Thus, identifying strategies that could effectively induce compliance without hindering internalization is essential for the promotion of optimal parenting.

The current study began this investigation by comparing logical consequences, a newly empirically identified and promising constraint strategy (Mageau et al., 2018; Robichaud et al., 2019), with classic strategies of authority exertion. Logical consequences can be defined as constraints that specifically focus on addressing the problem created by children's transgression rather than on merely eliciting aversion (Ginott, 1965). Using a sample of adolescents and an experimental vignette methodology (Aguinis & Bradley, 2014), we evaluated the impact of logical consequences, mild punishments, reasoning, and a no-authority exertion condition on youths' cognitive precursors of compliance and internalization, namely their beliefs about the effectiveness and acceptability of these authority exertion strategies as well as the reasons that would lead them to comply in response to these strategies (which can be more or less internalized).

Socialization in rule-breaking contexts

Socialization is the process by which people come to internalize and abide by societal norms and values, which in turn enables them to contribute to their society in a competent and responsible way (Maccoby, 1992). Parents, through their multiple interactions with their adolescents, play a predominant role in adolescents' socialization process. Although any parent–youth interaction represents a learning opportunity, some interactions are more decisive. For instance, young adults report that situations in which they had broken a rule as adolescents were among the situations in which they had learned the most about a value or an important lesson (Vinik, Johnston, Grusec, & Farrell, 2013). They also report that their parents played the most influential role among all the socialization agents that were involved in these learnings.

In coherence with young adults' retrospective reports, scholars suggest that parental authority exertion is essential for adolescents' psychosocial adjustment. Indeed, adolescence is a developmental period when children become increasingly critical of parental authority and, correspondingly, more inclined to question their parents' legitimacy to intervene in various rule-breaking contexts (with no consistent gender differences observed in this increase; Smetana, 2011; Smetana & Asquith, 1994; Soenens, Vansteenkiste, & Beyers, 2019). In spite of adolescents' critical attitude toward authority, research has nonetheless repeatedly found that a lack of parental authority during this developmental period is associated with more problem behaviors in youths (Baumrind, Larzelere, & Owens, 2010; Kawabata, Alink, Tseng, and van Ijzendoorn, & Crick, 2011; Smetana, Crean, & Campione-Barr, 2005). Thus, authority exertion seems to be an essential part of optimal parenting during adolescence and, following rule transgressions, may be particularly important for adolescents' socialization.

Authority exertion strategies

Authority exertion strategies refer to parenting practices aimed at promoting compliance to rules and internalization of the values or norms underlying these rules (Baumrind, 2012; Grusec & Goodnow, 1994). Whereas compliance involves adolescents' obedience to parental rules—that is,

the degree to which adolescents follow, or have the intention to follow, their parents' rules (Peterson, Rollins, & Thomas, 1985)—internalization manifests itself in the reasons underlying adolescents' decision to comply to parental rules (Grolnick, Deci, & Ryan, 1997). When internalization of the values or norms underlying a parental rule occurs, youths comply for autonomous reasons (e.g., because they personally find the rule to be important) rather than solely for controlled ones (e.g., to avoid losing privileges; Soenens, Vansteenkiste, & Niemiec, 2009). Because adolescents with internalized motives have accepted parental rules as their own, they are more likely to comply even in the absence of authority figures (Deci & Ryan, 2008). Thus, internalization is essential to achieve youths' long-term socialization, although obtaining youths' immediate compliance is sometimes also required to ensure the attainment of short-term goals and the development of essential regulatory and social skills (Patterson & Fisher, 2002). Consequently, in contexts where compliance is needed, an optimal authority exertion strategy would be one with the potential to elicit both compliance and internalization.

However, specific authority exertion strategies that could simultaneously achieve these two main socialization goals have not been clearly identified. As a result, the optimal way in which to exert authority in rule-breaking situations remains a topic of ongoing discussions in the parenting literature (e.g., Grusec, Danyliuk, Kil, & O'Neill, 2017). On the one hand, some scholars have underscored the importance of reasoning (i.e., explaining the consequences of adolescents' problematic behaviors for themselves and their environment) for internalization. When parents use this authority exertion strategy, they help their adolescents to understand the importance of the broken rule, which in turn promotes long-term internalization of the values or norms underlying the rule (Carlo, Knight, McGinley, & Hayes, 2011; Peterson et al., 1985). On the other hand, research conducted mostly among toddlers (Chapman & Zahn-Waxler, 1982) and elementary school children (Mageau et al., 2018) offers evidence that reasoning may sometimes lack effectiveness in generating immediate compliance (or compliance intentions). Accordingly, experts in parenting have recommended pairing reasoning with some form of constraint when reasoning alone is not sufficient to ensure compliance (Baumrind, 2012).

Constraints

Constraints are behavioral limitations imposed by authority figures on children, making use of their greater control over resources, to stop or obtain specific behaviors. In parent–youth interactions, examples of constraints used to limit adolescents' behavioral repertoire include withdrawal of privileges (e.g., removing the privilege to watch television) and requests to do tasks or chores (e.g., requiring doing the dishes). Parenting scholars have recommended that parents use such constraints in a strategic attempt to make youths experience sufficient aversiveness to convince them not to reproduce the undesirable behavior in the future (e.g., Baumrind et al., 2010, p. 186). When constraints are applied in such a manner, they are called mild punishments (Dadds & Salmon, 2003, p. 70). Take the example of adolescents who persistently exceed their fair share of monthly data on their family cell-phone plan. Withdrawing adolescents' privilege to see their friends until they have changed their data usage habits would be an example of a mild punishment. Indeed, such constraint could make adolescents live an unpleasant moment and in turn reduce their intentions to transgress in the future.

Mild punishments have been argued to elicit short-term compliance at all ages (Baumrind, 2012), but also to lack effectiveness in promoting long-term internalization (Larzelere et al., 2013). Indeed, according to some scholars, mild punishments could at times be perceived as coercive by children, which in turn could hamper internalization even in the presence of reasoning. More specifically, because of their typical orientation toward making children experience disagreeable events, mild punishments could render children wary of parental authority (Kochanska & Thompson, 1997) and make them focus on avoiding aversive experiences rather than on the values and norms underlying parental demands (Grolnick, 2003).

Consistent with these critical accounts of mild punishments, empirical studies examining the impact of mild punishments among adolescents, although limited in number, indicate that this strategy can elicit emotional reactions in adolescents likely to interfere with their internalization process (e.g., increased anger; Padilla-Walker, 2008). Studies conducted with preschool children also support the idea that mild punishments may hamper internalization, showing that children who are subjected to mild punishments tend to obey solely for controlled reasons rather than also for autonomous ones (Kremer, Smith, & Lawrence, 2010). Research looking at the effects of mild punishments on

elementary school children has, for its part, failed to yield unequivocal results, with the use of specific mild punishments sometimes being associated with more problem behaviors and other times being unrelated to such difficulties (e.g., Gershoff et al., 2010).

In sum, although research suggests that constraints have a positive impact on immediate compliance, it also offers some evidence that constraints could play a negative or inconsistent role in youths' internalization process when constraints are oriented toward eliciting aversion. Mild punishments, then, might not constitute an optimal way in which to exert authority.

Factors influencing the impact of constraints

According to influential reviews on parental authority exertion (Grusec et al., 2017; Grusec & Goodnow, 1994), the capacity of any authority exertion strategy to promote internalization could depend on adolescents' perceptions of its acceptability. Thus, the more adolescents perceive an authority exertion strategy as acceptable, the more they should adhere to and internalize the parental message underlying that strategy. Research anchored in social domain theory (Smetana, 2011) supports this proposition, showing that adolescents are more disposed to comply with parental rules in situations where they consider their parents to have the legitimacy to exert their authority (e.g., situations involving nonpersonal issues such as moral and conventional ones) compared with situations adolescents consider to be under their own jurisdiction (e.g., situations involving personal issues; Darling, Cumsille, & Loreto Martínez, 2007; Smetana & Asquith, 1994; Van Petegem et al., 2017). Importantly, research also shows that the way in which constraints are used is likely to affect their acceptability. For instance, constraints that are noncoercive (Pinquart, 2017), are delivered promptly (Van Houten, 1983), and have a harshness level that does not outdo the gravity of the transgression (Parke & Walters, 1967) are generally perceived as more appropriate.

Another feature of constraints that was put forth by parenting experts and that is uncharacteristic of mild punishments is the presence of a logical link between the *problem* that is created by a given transgression and the selected *constraint* (i.e., the problem–constraint link; Mageau et al., 2018). According to theoretical writings (e.g., Faber & Mazlish, 2000; Ginott, 1965), when parents manage to create such a link, thereby applying *logical consequences*, adolescents are specifically constrained to take responsibility for the consequences related to their transgression and participate in solving the transgression-induced problem, hence ensuring compliance. Alternatively, parents may also obtain compliance by taking the necessary actions to solve the transgression-induced problem such that youths experience the logical consequences of these changes (e.g., changes in routine, withdrawal of privileges).

Mageau et al. (2018) proposed that logical consequences' strong problem–constraint link should also lead children of all ages to understand the importance of broken rules at an experiential level, thereby facilitating the internalization of their underlying values or norms. Take again the example of adolescents who exceed their fair share of cell-phone data. Rather than choosing a constraint based on aversion (i.e., mild punishment, weak problem–constraint link), parents could use a logical consequence such as requiring their adolescents to record their daily data usage until the problem is solved or, alternatively, setting a monthly limit of data usage on adolescents' cell phones so that they would not be able to surpass their share of data. Such constraints would directly address the problem created by the transgression (i.e., the fact that cell-phone data were being used inappropriately) and make adolescents take responsibility for their actions or experience the consequences of parental problem solving. The presence of such a strong and logical problem–constraint link could in turn make these constraints more acceptable than mild punishments, hence reducing their detrimental effects on internalization.

Although a large number of theoretical studies have discussed the relevance of using logical consequences (e.g., Brooks, 1949; Dreikurs & Grey, 1968; Gilbert, 1986; Ginott, 1965) and multiple parenting programs have taught this strategy (Faber & Mazlish, 2000; Leijten et al., 2019), only two empirical studies to date have specifically evaluated the socializing role of the problem–constraint link (Mageau et al., 2018; Robichaud et al., 2019). These studies, conducted among elementary school children and their mothers, used experimental vignette designs to depict mother–child interactions in rule-breaking situations involving nonpersonal issues (as operationalized by social domain theory; Smetana & Asquith, 1994). Nonpersonal issues were targeted because children (and adolescents) tend

to consider that their parents have more legitimacy to intervene in these situations compared with personal ones (Smetana, 2011).

In the first study, Mageau et al. (2018) compared the impact of logical consequences, mild punishments, and a no-constraint condition (where mothers, after providing ineffective verbal prompts, reminded their children of the rule once again) on cognitive precursors of compliance and internalization, namely participants' effectiveness and acceptability beliefs regarding these authority exertion strategies. Results first showed that logical consequences were evaluated as presenting stronger problem-constraint links than mild punishments. In addition, and importantly, not only did participants perceive logical consequences as at least as effective as mild punishments to elicit future compliance, they also rated the former constraint strategy as more acceptable than the latter constraint strategy. Finally, in line with the literature on the importance of authority exertion in rule-breaking contexts, both logical consequences and mild punishments were perceived as more effective to elicit future compliance than the no-constraint condition. In a second study using the same sample of children, Robichaud et al. (2019) showed that children perceived logical consequences as less likely than mild punishments to generate emotions impeding their internalization process (i.e., anger) and more likely to elicit emotions facilitating it (i.e., empathy). Thus, empirical research has begun to show that constraints oriented toward addressing transgression-induced problems (i.e., logical consequences, strong problem-constraint link) could promote internalization, or at least avoid hindering it, to a greater extent than constraints oriented toward prompting aversion (i.e., mild punishments; weak problem-constraint link).

The current study

Although promising, these past findings have some limitations that ought to be addressed in order to gain further insights into the effects of logical consequences and the problem-constraint link on participants' cognitive precursors of compliance and internalization. The goal of the current study, thus, was to overcome these limitations by making the following improvements to past methodologies.

First, we recruited adolescents instead of children so that we could (a) document how the previously observed advantages of logical consequences with elementary school children translate into adolescence and (b) explore whether age and gender differences sometimes observed in adolescents' appraisals of authority would play a role in their perceptions of logical consequences (e.g., Smetana & Asquith, 1994). Second, in addition to evaluating the impact of the problem-constraint link on effectiveness and acceptability beliefs, we examined its influence on adolescents' anticipated internalized reasons to comply (i.e., autonomous vs. controlled) in order to obtain a supplementary indicator of internalization. Third, to further specify the socializing impact of the problem-constraint link, we compared constraint strategies with two no-constraint conditions, namely one condition where parents use reasoning (as was done in previous research) and one no-authority exertion condition where parents solely repeat the rule.

Lastly, and importantly, we added a methodological control within our research design meant to isolate the effect of the problem-constraint link from constraint- and transgression-related confounding effects. More specifically, instead of using different constraints for the logical consequence and mild punishment conditions as was done in previous research (e.g., depriving children from a bedtime story as a logical consequence vs. prohibiting children from going to see their friends as a mild punishment), we evaluated whether the same constraints (e.g., prohibiting children from going to see their friends) could have a differential impact depending on whether they were used as logical consequences (i.e., in response to recurrently not doing the dishes before going out) or as mild punishments (i.e., in response to the transgression of watching a frightening television episode in front of one's siblings when babysitting). Thus, each constraint was presented twice: once in a context where its problem-constraint link was stronger and once where it was weaker. We then averaged the score of each condition across the two scenarios so that the impact of potential constraint- and transgression-related confounds would be present in all constraint conditions and, thus, would be minimized.

Our main hypotheses were that we would replicate and extend Mageau et al. (2018) main results. Specifically, we expected that adolescents would evaluate logical consequences and mild punishments

as the two most (and equally) effective strategies to elicit future compliance, whereas the sole use of reasoning would be evaluated as less effective than both constraint conditions. Concerning acceptability, we hypothesized that logical consequences would be evaluated as more acceptable than both reasoning and mild punishments. Regarding no-authority exertion, we expected this strategy to be perceived as the least effective and acceptable one because of the lack of parental authority implied in this condition.

With respect to adolescents' reasons to comply, we hypothesized that they would vary as a function of the exerted authority strategy. Logical consequences and reasoning both were expected to relate to more relative internalized reasons to comply (i.e., more autonomous reasons to comply paired with less controlled ones) compared with mild punishments. In the case of no-authority exertion, we expected that this strategy would induce the least reasons to comply, both controlled and autonomous, because it does not require youths to comply, nor does it inform them about the values or norms underlying the rules.

Finally, regarding individual differences, we hypothesized that the advantages of logical consequences over alternative authority exertion strategies would be more pronounced for younger adolescents compared with older ones given that adolescents generally become more critical of parental authority as they grow older (potentially regardless of strategy types) and also report feeling less obliged to comply to parental rules (Smetana & Asquith, 1994). For gender, the lack of consistent results regarding its moderating role in youths' appraisals of authority did not allow us to formulate hypotheses.

Method

Participants

We targeted 9th- to 11th-grade high school students and recruited a sample of 214 adolescents aged 14 to 18 years ($M = 15.28$ years, $SD = 0.79$; 47.7% girls). A little less than two fifths (38.0%) of the adolescents were aged 16 to 18 years, and the remaining 62.0% were either 14 (15.1%) or 15 (46.9%) years old. Nearly all of the adolescents (97.2%) went to public schools, and the rest studied in a private school. About two thirds of adolescents in the sample were born in Canada (64.4%), and the others were born in various countries in Europe (6.8%), Africa (16.6%), Asia (2.4%), and the American continents (9.8%). In contrast, a little less than a third of the adolescents' parents were born in Canada (mothers = 31.3%, fathers = 26.2%), and the rest were born in various countries around the globe. In terms of education, approximately half of participants' parents had a university degree (mothers = 56.1%, fathers = 50.9%), 19.2% had postsecondary certification, and the remainder had a high school diploma as their highest qualification (mothers = 14.0%, fathers = 18.2%) or did not finish high school (mothers = 10.7%, fathers = 11.7%). We asked adolescents to indicate their family's income, but the majority (65.4%) did not know it; thus, we did not include this variable in the current research.

Procedure

This questionnaire-based study was completed during a single class visit. Prior to the class visit, we sent an information letter to the participants and their parents explaining the goals and procedure of the study that would take place at the participants' high school. We then met the participants in class, reminded them of what the study entailed, obtained their signed consent, and invited them to fill out a two-part questionnaire.

The first part of the questionnaire consisted of an experimental manipulation of the different parental authority exertion strategies, and the second part included demographics and scales that were part of a larger study on parenting. To manipulate authority exertion strategies, we presented comic strips illustrating mother-adolescent interactions in rule-breaking scenarios (details are presented in the next section). Participants were asked to read the comic strips and share their perceptions of the effectiveness and acceptability of the exerted parental authority strategies in response to the depicted adolescents' transgressions (Mageau et al., 2018) as well as the reasons that would have underlain

their intentions to comply if they had been the adolescents in the story (autonomous vs. controlled) (Deci & Ryan, 2008). To ensure the validity of our scenarios, we also included two manipulation checks: one to make certain that the issues underlying the transgressions were nonpersonal (and thus represented situations where parental authority could be perceived as legitimate by the adolescents; Smetana & Asquith, 1994) and one to ensure that the problem–constraint link was stronger for logical consequences than for mild punishments (Mageau et al., 2018).

Experimental manipulation

We manipulated parental authority exertion strategies (logical consequences, mild punishments, reasoning, and no-authority exertion) by asking adolescents to read a series of comic strips depicting mothers responding in different ways to their adolescents' persistent rule-breaking behaviors. In total, we created two rule-breaking scenarios, resulting in a total of 8 comic strips (2 scenarios \times 4 authority exertion strategies). To enhance the external validity of our findings, scenarios were inspired by Smetana and Asquith (1994) list of daily nonpersonal rule-breaking situations. In the first scenario, adolescents (either girls or boys, depending on participants' gender) watch a frightening television show in front of their siblings while babysitting them and despite knowing that the show gives them nightmares (TV scenario). In the second scenario, adolescents know it is their turn to do the dishes after dinner but play videogames on their computer instead (dishes scenario). In both scenarios, the adolescents plan to go to their friend's house later that evening and need a ride from their mother to go.

Based on Mageau et al. (2018) experimental manipulation, the first three images of each comic strip depicted mothers who first remind their adolescents of the rule in an autonomy-supportive way. More precisely, they state the rule (all conditions), acknowledge their adolescents' feelings (all conditions), provide a rationale for the rule (all conditions except the no-authority exertion condition), and state their expectations regarding their adolescents' behaviors (constraint conditions only). Authority exertion strategies were then manipulated in the fourth and last image of the comic strip. In this last image, adolescents persist in their rule-breaking behavior and their mothers respond. In the no-authority exertion condition, mothers do not intervene and drive their adolescents to their friend's house. In the reasoning condition, mothers give a new issue-relevant rationale before driving their adolescents to their friend's house. In the constraint conditions, mothers withdraw their adolescents' privilege either to watch television or to go to their friend's house.

In the TV scenario, withdrawing the privilege to watch television addresses the problem created by the adolescents' transgression, making this constraint a logical consequence. In contrast, withdrawing the privilege to go to their friend's house can be considered a mild punishment because this constraint is unrelated to the adolescents' problematic use of television and rather aims to elicit aversiveness. In the dishes scenario, however, the role of each constraint is reversed. Withdrawing the privilege to watch television is unrelated to the adolescents' problematic behavior and becomes a mild punishment. In contrast, given that adolescents no longer have sufficient time left to both do the dishes and go to their friend's house, withdrawing the privilege to go to their friend's house in order to ensure that the dishes are done becomes a logical consequence, one that is logically linked to the transgression-induced problem (i.e., the dishes need to be cleaned¹). This manipulation ensured that all transgressions and constraints would be presented in each condition, thereby controlling for the impact of potential confounded variables related to their characteristics and, hence, adding validity to our manipulation (see Table 1 for an overview of the specific authority exertion strategies used for each scenario).

To further enhance the validity of our manipulation, we followed Aguinis and Bradley (2014) recommendations for maximizing the external validity of comic strip-based experimental manipulations. Notably, we (a) asked participants to read and rate all the comic strips, thereby creating a repeated-measure design; (b) counterbalanced the presentation order of the vignettes using a balanced Latin

¹ Note that for any transgression-induced problem, countless logical consequences exist. For example, adolescents could have decided to exchange "dishes night" with a sibling and, thus, go to their friend's house that night but be constrained to do the dishes the following evening. We chose this particular constraint because of its relevance as a punishment in the other scenario.

Table 1
Specific authority exertion strategies used for each transgression scenario.

	Authority exertion strategy			
Scenario	Logical consequences	Mild punishment	Reasoning	No-authority exertion
TV	Not watching television	Not seeing friends	Reasoning	None
Dishes	Not seeing friends	Not watching television	Reasoning	None

square (i.e., where each comic strip followed and was followed by each other comic strip only once), thereby methodologically controlling for order and carryover effects (Brooks, 2012, Myers, Hansen, & Ferrand, 2007); (c) enhanced the realism of the scenarios by ensuring that participants' gender was the same as the comic strip characters' gender; (d) added images to the text to enhance the immersion of

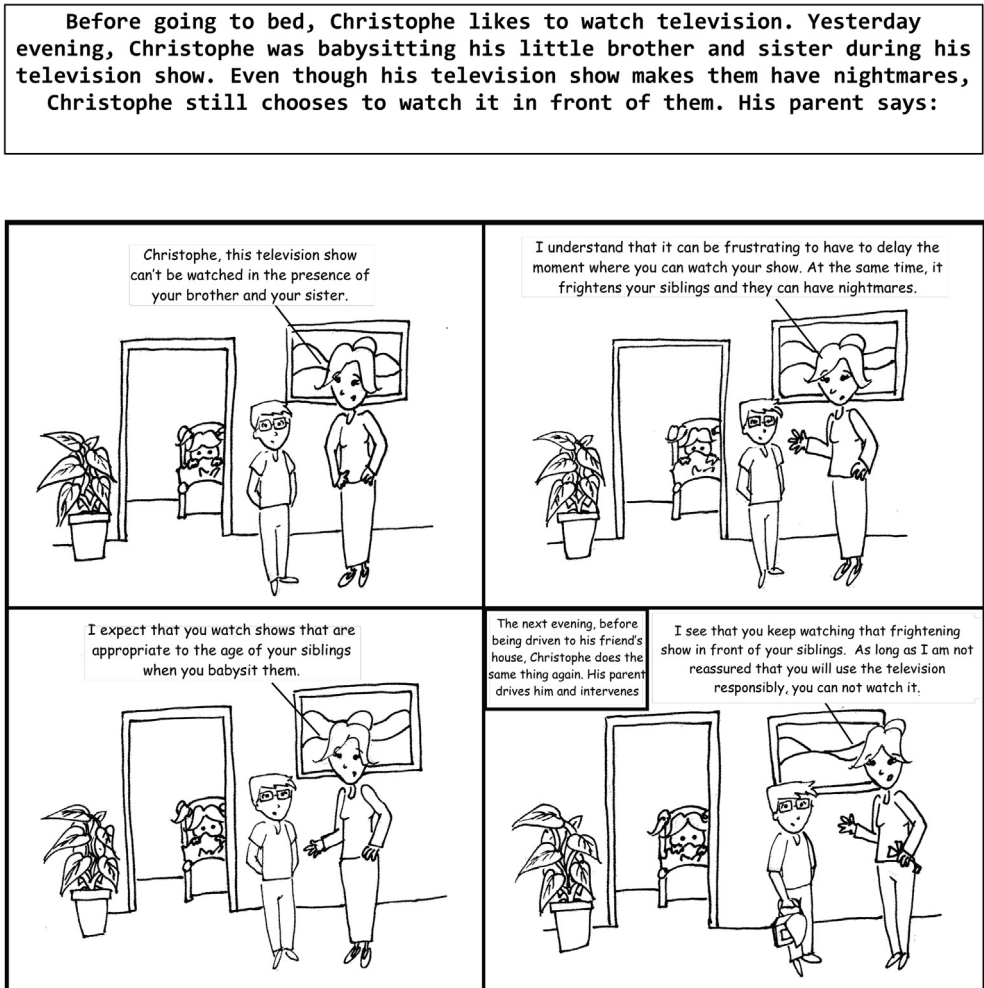


Fig. 1. Comic strip for the logical consequence in the TV scenario.

Table 2

Stories for the TV scenario comic strips Context: Before going to bed, Christophe likes to watch television. Yesterday evening, Christophe was babysitting his little brother and sister during his television show. Even though his television show makes them have nightmares, Christophe still chooses to watch it in front of them. His parent says:

Condition	Story
Logical consequence	This story is depicted in the comic strip in Fig. 1
Mild punishment	Image 1—Mother: Christophe, this television show can't be watched in the presence of your siblings. Image 2— Mother: I understand that it can be frustrating to have to delay the moment where you can watch your show. At the same time, it frightens your siblings and they can have nightmares. Image 3—Mother: I expect that you watch shows that are appropriate to the age of your siblings when you babysit them. Image 4—The next evening, before being driven to his friend's house, Christophe does the same thing again. His parent intervenes. Mother: I see that you keep watching that frightening show in front of your siblings. Since it's this way, I forbid you to go to your friend's house tonight!
Reasoning	Image 1—Mother: Christophe, this television show can't be watched in the presence of your brother and your sister. Image 2—Mother: I understand that it can be frustrating to have to delay the moment where you can watch your show. Image 3—At the same time, it frightens your siblings and they can have nightmares. Image 4—The next evening, before being driven to his friend's house, Christophe does the same thing again. His parent drives him and intervenes: Mother: Christophe, this show really frightens your brother and your sister. When you are in charge of their well-being, it is your responsibility to assure that you do not do them harm.
No-authority exertion	Image 1—Mother: Christophe, I understand that it can be frustrating to have to delay the moment where you can watch your show. Image 2—Mother: At the same time, I do not agree with watching this television show in the presence of your brother and your sister. Image 3—The next evening, before being driven to his friend's house, Christophe does the same thing again. His parent notices it but does not intervene: Mother: Christophe, it is time to go to your friend's. Image 4—Christophe takes his bag and leaves.

participants in the story; and (e) limited the length of the scenario and text, as well as the number of comic strips, to prevent information overload and fatigue in participants. Fig. 1 presents an example of a comic strip for the TV scenario, and Table 2 presents the stories for the other conditions in this scenario.

Manipulation checks and validity

Issues underlying the transgressions

To confirm that adolescents' transgressions depicted in the scenarios were perceived as nonpersonal issues, we used Smetana and Asquith (1994) procedure. Specifically, participants indicated in which of the three following categories they thought each transgression belonged: (a) always wrong whether or not the parent says so, (b) wrong only if the parent says so, or (c) not an issue of right or wrong—up to the individual. Categorizing a transgression in category (a) or (b) indicated that participants considered the transgression to be a nonpersonal issue (e.g., moral or conventional, respectively), whereas category (c) indicated that they perceived the transgression to be a personal issue. This procedure has been widely used and shown to distinguish personal transgressions from nonpersonal ones effectively (Smetana, 2011; Smetana & Asquith, 1994).

Problem–constraint link

To verify that our experimental manipulation successfully differentiated logical consequences from mild punishments in terms of their problem–constraint link strength, we asked participants to rate the extent to which they believed that each depicted constraint was logically linked to the transgression-induced problem (Mageau et al., 2018). Specifically, participants indicated their level

of agreement with the following statement for each constraint scenario: "In my opinion, the parent's intervention is logically related to the adolescent's behavior" (using a 5-point scale from 1 = *do not agree at all* to 5 = *completely agree*).

Dependent measures

Effectiveness

We also asked adolescents to evaluate their perceptions of the effectiveness of the different parental authority exertion strategies to elicit future compliance. After reading each comic strip, adolescents rated their level of agreement with the following statement: "In my opinion, the parent's intervention is effective to prevent this situation from repeating itself" (using a 5-point scale from 1 = *do not agree at all* to 5 = *completely agree*). This item was also successfully used by Mageau et al. (2018) and demonstrated good validity.

Acceptability

After reading each comic strip, adolescents evaluated the acceptability of the employed parental authority exertion strategy by indicating their level of agreement with the following statement: "In my opinion, the parent's intervention is acceptable" (using a 5-point scale from 1 = *do not agree at all* to 5 = *completely agree*). This item was used by Mageau et al. (2018) in a similar experimental setting and was shown to be sensitive to differences in interpersonal climates and authority exertion strategies, thereby suggesting good validity.

Reasons to comply

To assess the impact of the parental authority exertion strategies on adolescents' reasons to comply, we used items based on Soenens et al. (2009) version of the Self-Regulation Questionnaire (Ryan & Connell, 1989), which is adapted to rule-breaking contexts. After reading each comic strip, adolescents indicated their level of agreement with different reasons that would explain why they would choose to obey their parents' rule "if [they] were the adolescent of the story and the situation would repeat itself" (using a 5-point scale from 1 = *do not agree at all* to 5 = *completely agree*). Autonomous compliance was measured by one item of identified motivation ("I would follow the rule of my own free will because I would believe it to be important"), whereas controlled compliance was measured with one item of extrinsic motivation ("I would follow the rule because otherwise I would be afraid to lose the privileges that my parent is giving me").

Based on Soenens et al. (2009) procedure, we subtracted the extrinsic motivation score from the identified motivation one to yield a relative internalization index that would reflect children's level of relative internalized reasons to comply. A score of zero on the relative internalization index scale implies that inasmuch as adolescents experience autonomous (i.e., internalized) reasons to comply, they also experience controlled (i.e., noninternalized) ones. Thus, adolescents scoring higher (or lower) than zero experience more (or less) autonomous reasons to comply than controlled ones. The validity of this index is high, having been positively related to various indicators and outcomes of internalization (e.g., Black & Deci, 2000). Its use, however, may sometimes blur important distinctions between autonomous and controlled compliance such that autonomous compliance and controlled compliance should also be examined separately.

Results

Plan of analyses

Prior to conducting the main analyses, we evaluated the validity of the two scenarios by examining whether (a) the majority of the participants perceived the transgressions as pertaining to nonpersonal issues (descriptive statistics and chi-square test) and (b) logical consequences were perceived as having a stronger problem-constraint link than mild punishments (*t* test). For informative purposes, we also assessed whether the impact of the problem-constraint link (i.e., logical consequences vs. mild

punishments) on the dependent variables of the study (perceived effectiveness, acceptability, and internalized reasons to comply) varied across scenarios (i.e., TV scenario vs. dishes scenario) using a multivariate analysis of variance (MANOVA), followed by a series of repeated-measure ANOVAs adjusted for potential deviations of the sphericity assumption with the Greenhouse–Geisser correction. To unpack significant interactions, we examined differences between the logical consequence and mild punishment conditions in each scenario.

To conduct our main analyses, we computed the mean score of each dependent variable for the two scenarios and conducted a MANOVA to verify whether there was a significant effect at the multivariate level of the authority exertion strategies (logical consequences, mild punishments, reasoning, and no authority) while also considering the potential moderating roles of gender (female = 0, male = 1) and age (15 years and under = 0, 16 years and older = 1). Afterward, we performed a series of repeated-measure ANOVAs adjusted for potential deviations of the sphericity assumption with the Greenhouse–Geisser correction to compare the impact of the four authority exertion strategies on each dependent variable while taking into account any significant moderation of gender and age found at the multivariate level. When ANOVAs were significant, we interpreted Bonferroni-adjusted post hoc comparisons.

Finally, to explore potential distinctions between the effect of authority exertion strategies on adolescents' autonomous and controlled reasons to comply, we repeated the ANOVA procedure using the separate scores of controlled and autonomous compliance as dependent variables (Deci & Ryan, 2008).

Preliminary analyses

Manipulation check

The vast majority of the participants (i.e., approximately 90% for both scenarios) categorized the transgressions as involving nonpersonal (i.e., moral or conventional) issues rather than personal ones (for more information on participants' categorization of the issues underlying the transgressions, see online [supplementary material](#)). Chi-square tests confirmed that these differences in proportions were significant, both $\chi^2(1) \geq 128$, $ps < .001$. Concerning the constraints, participants rated them on average as presenting a stronger problem–constraint link when they were operationalized as logical consequences ($M = 3.72$, $SD = 1.02$) than as mild punishments ($M = 3.21$, $SD = 1.14$), $d = .38$. Paired t tests confirmed these differences to be significant for each scenario, both $ts(213) \geq 2.72$, $ps \leq .007$, $ds = .17$.

Interaction effects

Results revealed the existence of a significant interaction effect between the problem–constraint link and the transgression scenarios at the multivariate level, Wilks' $\Lambda = .91$, $F_{\text{exact}}(4, 199) = 5.07$, $p = .001$, $\tau^2 = .09$. At the univariate level, significant interactions occurred for effectiveness beliefs, $F(1, 292.62) = 18.12$, $p < .001$, $\eta_p^2 = .08$, and acceptability beliefs, $F(1, 207.50) = 10.37$, $p = .001$, $\eta_p^2 = .05$, but not for the relative internalized index, $F(1, 265.47) = 2.34$, $p = .127$.

Unpacking significant interactions revealed that in the dishes scenario, the logical consequence condition (i.e., no friends; $M = 3.56$, $SD = 1.30$) was evaluated as significantly more effective than the mild punishment condition (i.e., no television; $M = 3.09$, $SD = 1.39$), $d = .31$. In terms of acceptability, the logical consequence condition ($M = 3.60$, $SD = 1.15$) was evaluated as significantly more acceptable than the mild punishment condition ($M = 3.13$, $SD = 1.27$), $d = .29$. In the TV scenario, however, the logical consequence condition (i.e., no television; $M = 3.62$, $SD = 1.25$) was evaluated as significantly less effective than the mild punishment condition (i.e., no friends; $M = 3.85$, $SD = 1.18$), $d = .15$. In terms of acceptability, the logical consequence condition ($M = 3.63$, $SD = 1.19$) did not significantly differ from the mild punishment condition ($M = 3.59$, $SD = 1.17$), $p = .720$. To control for these interaction effects (and related confounds) in our main analyses, we averaged the scores of each constraint condition across the two scenarios such that all confounds would be present in all constraint conditions.

Table 3

Means (and standard deviations) of adolescents' perceived effectiveness and acceptability of authority exertion strategies and autonomous as well as controlled compliance.

	Age	No-authority exertion	Reasoning	Logical consequences	Mild punishments
Perceived effectiveness		1.36 (0.72) _a	2.65 (1.08) _b	3.60 (1.01) _c	3.47 (1.02) _c
Perceived acceptability		2.01 (1.17) _a	3.26 (1.17) _b	3.62 (0.94) _c	3.36 (1.01) _b
Relative internalization index	Young	0.44 (1.23) _a	0.79 (1.70) _a	-0.03 (1.57) _b	-0.48 (1.59) _c
	Old	0.31 (1.45) _a	0.32 (1.69) _a	0.04 (1.49) _a	-0.03 (1.40) _a
Autonomous compliance	Young	2.68 (1.35) _a	3.40 (1.21) _b	3.28 (1.11) _{bc}	3.02 (1.20) _c
	Old	3.08 (1.34) _a	3.27 (1.16) _a	3.36 (1.10) _a	3.33 (1.10) _a
Controlled compliance	Young	2.34 (1.30) _a	2.62 (1.33) _b	3.31 (1.28) _c	3.50 (1.20) _c
	Old	2.76 (1.39) _a	2.95 (1.35) _a	3.31 (1.29) _b	3.35 (1.26) _b

Note. The *n* for the group of young adolescents is 127. The *n* for the group of old adolescents is 78. For each row, means with different subscripts differ significantly at $p < .05$.

Main analyses

Multivariate effect

Means and standard deviations of each dependent variable for each condition (averaged across scenarios) are presented in Table 3. Analyses at the multivariate level first revealed a nonsignificant three-way interaction effect among authority exertion strategies, gender, and age, Wilks' $\Lambda = .95$, $F_{\text{exact}}(8, 192) = 1.20$, $p = .301$. Looking at potential interactions between authority exertion strategies and each moderator revealed a nonsignificant effect for gender, Wilks' $\Lambda = .96$, $F_{\text{exact}}(8, 192) = 1.09$, $p = .369$, and a significant effect for age, Wilks' $\Lambda = .91$, $F_{\text{exact}}(8, 192) = 2.43$, $p = .016$, $\tau^2 = .09$. Thus, we proceeded with analyses at the univariate level for each dependent variable, including age as a moderator.

Effectiveness

No significant interaction effect was found between parental authority exertion strategies and age on adolescents' effectiveness beliefs, $F(2.83, 573.18) = 1.07$, $p = .357$. However, there was a significant main effect of the parental authority exertion strategies on adolescents' effectiveness beliefs, $F(2.83, 600.05) = 291.33$, $p < .001$, $\eta_p^2 = .58$. Replicating Mageau et al. (2018) findings, adolescents rated both constraint conditions (i.e., logical consequences and mild punishments) as more effective to elicit future compliance than reasoning (all $ds \geq .60$). Furthermore, they rated all three mentioned strategies as more effective than no-authority exertion (all $ds \geq 1.17$). Although adolescents rated logical consequences as more effective than mild punishments, this difference was not statistically significant ($p = .747$).

Acceptability

We did not find a significant interaction effect between parental authority exertion strategies and age on adolescents' acceptability beliefs, $F(2.67, 538.63) = 0.17$, $p = .895$. Nonetheless, we observed a significant main effect of the parental authority exertion strategies on adolescents' acceptability beliefs, $F(2.66, 600.65) = 115.89$, $p < .001$, $\eta_p^2 = .35$. Adolescents rated logical consequences as the most acceptable strategy, differing significantly from mild punishments ($d = .21$) and reasoning ($d = .27$), which in turn did not differ from each other ($p > .999$). No-authority exertion was considered the least acceptable strategy by adolescents, being significantly lower than all other strategies (all $ds \geq .19$).

Relative internalization index

With the relative internalization index (i.e., controlled compliance subtracted from autonomous compliance), we observed a significant interaction effect between parental authority exertion strategies and age on adolescents' anticipated relative internalized reasons to comply, $F(2.91, 587.07) = 5.59$, $p = .001$, $\eta_p^2 = .03$. Simple effects revealed that younger adolescents reported significantly different rel-

ative internalization levels across authority exertion strategies, $F(2.90, 361.86) = 26.60, p < .001, \eta_p^2 = .18$, whereas older adolescents reported only marginal, and thus nonsignificant, differences, $F(2.86, 220.43) = 2.50, p = .064, \eta_p^2 = .03$. Specifically, younger adolescents reported higher anticipated relative internalization in response to logical consequences compared with mild punishments ($d = .29$). In addition, they evaluated reasoning and no-authority exertion as yielding equivalently greater relative internalized index scores than both constraint conditions (all $ds \geq .28$). Given the marginal effect of the parental authority exertion strategies on anticipated relative internalized reasons to comply for older adolescents, we examined post hoc comparisons in an exploratory fashion. No significant difference was found between conditions (all $ps \geq .254$).

Exploratory analyses

Autonomous compliance

Reanalyzing autonomous compliance and controlled compliance separately, we observed a significant interaction effect between parental authority exertion strategies and age on adolescents' anticipated autonomous compliance, $F(2.83, 572.57) = 3.37, p = .020, \eta_p^2 = .02$. Probing this interaction, the simple effect of parental authority exertion strategies was found to be significant for younger adolescents, $F(2.85, 356.55) = 14.75, p < .001, \eta_p^2 = .11$, but not for older adolescents, $F(2.72, 209.15) = 1.75, p = .163$. Specifically, younger adolescents believed that mild punishments would elicit fewer autonomous reasons to comply than reasoning ($d = .31$) and logical consequences, although this last difference was marginal (and thus nonsignificant) ($p = .088, d = .09$). No significant difference was found between logical consequences and reasoning ($p > .999$). Concerning no-authority exertion, adolescents believed that this strategy would encourage them to comply for fewer autonomous reasons than all other strategies (all $ds \geq .25$).

Controlled compliance

Finally, we observed a significant interaction effect between parental authority exertion strategies and age on adolescents' anticipated controlled compliance, $F(2.55, 515.35) = 5.35, p = .002, \eta_p^2 = .03$. Here, the simple effect of parental authority exertion strategies was significant for both younger adolescents, $F(2.51, 314.17) = 48.19, p < .001, \eta_p^2 = .28$, and older adolescents, $F(2.60, 199.98) = 8.56, p \leq .001, \eta_p^2 = .10$, although the effect was again more pronounced among younger adolescents. Post hoc comparisons first showed that adolescents of all ages believed that the two constraint conditions (i.e., logical consequences and mild punishments) would lead them to comply for more controlled reasons than reasoning (all $ds \geq .31$). In addition, younger adolescents (but not older adolescents, $p = .874$) evaluated reasoning as yielding significantly more controlled reasons to comply than no-authority exertion ($d = .22$). Finally, although all adolescents rated logical consequences as prompting less controlled compliance than mild punishments, these differences were not significant (all $ps \geq .261$).

Discussion

The results of this study provide support to the idea that parents' application of logical consequences after a transgression of a rule has the potential to promote both compliance and (at least compared with mild punishments, especially for younger adolescents) internalization, although at this stage only cognitive precursors of these two socialization goals were examined. Indeed, by extending past findings to a sample of adolescents and enhancing previous research with a more rigorous experimental design, the current research suggests that the same constraint can have different impacts depending on the strength of its link to the transgression-induced problem.

The effectiveness of constraints across ages

The first and important contribution of the current study is the insights it offers in the potential role of parental authority exertion in nonpersonal rule-breaking situations. Data suggest that, like ele-

mentary school children (Mageau et al., 2018), adolescents believe that constraints (i.e., both mild punishments and logical consequences) would lead to more compliance than relying solely on reasoning. Thus, although reasoning may be an important component of parental authority during adolescence, it may nevertheless remain insufficient to elicit future compliance in persistent rule-breaking contexts (although more so than no-authority exertion). Our research also extends past findings by showing that the added benefit of constraints on compliance intentions is even stronger when compared with a no-authority exertion condition. Together, these findings support the idea that the use of constraints might be a key component of parenting and have important repercussions for children's socialization process even into adolescence (Baumrind, 2012; Grolnick & Pomerantz, 2009).

The current findings also highlight mothers' role in establishing parental authority during adolescence. Indeed, although adolescence is a developmental period marked by questioning of parental rules and authority, both younger and older adolescents nevertheless seemed to anticipate that they would adjust their compliance intentions according to the specific authority exertion strategy that mothers apply. When mothers do not enforce rules by using constraints despite recurrent transgressions, they may send a strong message that compliance is optional, thereby reducing compliance intentions. Low compliance intentions in turn may be highly detrimental to the mother-child relationship if, for example, mothers attribute those intentions to internal dispositions (e.g., to children's lack of respect; Critchley & Sanson, 2006). Future research could examine whether similar results can be observed in father-child relationships as well.

The role of the problem-constraint link in adolescents' acceptability beliefs

In addition to showing the importance of using constraints to foster compliance intentions, the current results further revealed that the problem-constraint link could improve constraints' acceptability without affecting compliance. Indeed, not only did adolescents report that logical consequences were as effective as mild punishments to elicit future compliance, they also perceived the former strategy as more acceptable than the latter one. This finding has been consistent across three samples, each composed of different age groups (Mageau et al., 2018; this study) and even when controlling for confounded factors related to the nature of constraints and of transgressions (this study). Together, these studies suggest that the presence of a strong problem-constraint link may increase the socialization role of constraints. By imposing a constraint that requires children to assume the responsibility of the consequences related to their transgression (instead of simply delivering an aversive experience), parents may enhance the informational value of their intervention and, hence, its acceptability. This finding is important because higher acceptability beliefs are an important precursor of internalization (Grusec & Goodnow, 1994). Although a large number of studies anchored in social domain theory have assessed the role of the issues underlying transgressions in the legitimacy of parental authority (Smetana, 2011), less is known about the factors that can influence the specific acceptability of constraints within high-legitimacy rule-breaking contexts. The current study adds a valuable contribution to this field of research by showing that the problem-constraint link seems to be a decisive factor.

The role of the problem-constraint link in adolescents' reasons to comply

The current study also contributes significantly to the literature by further documenting the role of the problem-constraint link in internalization through adolescents' anticipated reasons to comply. Documenting such a role is important because scholars have highlighted the negative impact that constraints could have on this important indicator of internalization (e.g., Kochanska & Thompson, 1997; Kremer et al., 2010). The current results raised the possibility that the undesirable byproduct of constraints on reasons to comply may be minimized if the exerted constraint has a stronger problem-constraint link. An importance nuance, however, is that this effect seems to depend on adolescents' age.

Younger adolescents' reasons to comply

Indeed, results showed that younger adolescents (i.e., aged 14 and 15 years) identified logical consequences as more likely to encourage relative internalized reasons to comply (i.e., more autonomous

compliance paired with less controlled compliance) than mild punishments, although less so than reasoning and no-authority exertion. Exploratory analyses investigating autonomous compliance and controlled compliance separately offered additional insights into this matter, revealing that the observed disadvantage of logical consequences on the relative internalization index compared with reasoning (and with the no-authority exertion condition) did not originate from a lower score on autonomous compliance but rather originated from a higher score on controlled compliance. Thus, younger adolescents gave high scores to logical consequences on both autonomous compliance (i.e., more so than no-authority exertion and, to a marginal but nonsignificant extent, mild punishments) and controlled compliance (i.e., more so than all other strategies except mild punishments), whereas reasoning elicited high scores on autonomous compliance (i.e., more so than all strategies except logical consequences) but rather low scores on controlled compliance (i.e., more so than no-authority exertion only). In other words, logical consequences and reasoning seem to be similar in the extent to which they encourage younger adolescents to perceive autonomous reasons to comply (with a slight advantage given to reasoning given that, compared with logical consequences, this strategy promotes significantly [rather than marginally] more autonomous compliance than mild punishments). However, compared with reasoning, logical consequences have the disadvantage of also eliciting a greater amount of controlled reasons to comply such that their score on the relative internalization index is approximately zero.

These results can be understood in different ways. At first glance, they seem to highlight the importance of favoring reasoning over constraint strategies in order to foster optimal relative internalized reasons to comply in addition to nuancing that the disadvantages of logical consequences over reasoning (in contrast to mild punishments) seem to be mostly related to an increase of controlled reasons to comply (rather than also to a decrease of autonomous compliance). Yet, the high score of logical consequences on controlled compliance may also be interpreted as an indication that full internalization in response to this constraint strategy might not occur immediately (i.e., that the process of transforming controlled reasons to comply into autonomous ones may take some time). In the current study, adolescents reported their reasons to comply immediately after (fictive) mothers communicated to the adolescents that they would be constrained, which might have inflated controlled compliance scores (because an extrinsic factor [i.e., the loss of a privilege] was arguably particularly salient at this point in time in addition to being not fully processed and hence internalized). Furthermore, this procedure might have prevented adolescents from giving logical consequences a higher score on autonomous compliance because this constraint strategy is argued to foster adolescents' internalization process particularly through experiential learning (i.e., when adolescents actually experience the consequences related to the problem created by their transgression). This interpretation suggests that adolescents' evaluation of logical consequences could improve when constraints are reflected on in retrospect—that is, after experiential learning occurred and when extrinsic factors are less prominent and have been internalized. Researchers interested in examining this possibility could use a diary design and ask adolescents to report on their parents' constraints at different moments (e.g., when constraints are communicated, applied, and reflected on in retrospect) so that they could examine whether (a) adolescents' reasons to comply do change with time and whether (b) this change is moderated by the type of constraints their parents applied (logical consequences vs. mild punishments).

Older adolescents' reasons to comply

Regarding older adolescents (i.e., aged 16 to 18 years), results showed that their relative internalization index score did not significantly change as a function of the employed authority exertion strategies. Probing these results by examining autonomous compliance and controlled compliance individually revealed that older adolescents anticipated that the different authority exertion strategies would elicit different degrees of controlled reasons to comply (i.e., in a similar way to what younger adolescents reported), but not of autonomous reasons to comply.

There are several ways in which to interpret the observed age differences. One possible explanation stems from the idea that, in rule-breaking situations where underlying values or norms have already been internalized, adolescents' disposition to comply for autonomous reasons may be independent of parents' choice of authority exertion strategy. If this is the case, one could hypothesize that the older adolescents in the current study, being arguably more mature and better socialized than the younger

adolescents, had already well internalized the values and norms underlying the depicted rule-breaking situations such that they did not perceive that their decision to obey for autonomous reasons depended on the specific authority exertion strategy that parents applied (contrary to younger adolescents who had yet to internalize these rules to a similar extent). Looking at adolescents' autonomous compliance scores across conditions offers some indirect evidence in favor of this hypothesis; both the lowest and average scores of autonomous compliance were higher for older adolescents ($M = 3.26$, range = 3.08–3.36) than for younger adolescents ($M = 3.10$, range = 2.68–3.40). Future research exploring the role of prior internalization on the socializing effect of parental authority exertion strategies could ask adolescents to rate the extent to which they personally adhere to values or norms underlying a given rule and then examine whether this rating predicts the degree of influence that the choice of authority exertion strategy has on their autonomous reasons to comply in rule-breaking situations involving that rule.

Strengths, limitations, and future research directions

The current study has methodological strengths that are worth mentioning. Notably, our experimental design allowed us to isolate the impact of the problem–constraint link, hence providing further evidence in favor of the socializing role played by this characteristic. Making additional rigorous efforts to enhance the validity of our manipulation also added confidence in our findings (e.g., manipulation checks, following best practice recommendations for experimental vignette methodologies, counterbalancing the presentation order of the authority exertion strategies).

Nonetheless, our methodology contains limitations that are also important to consider when interpreting the current results. First, solely using hypothetical scenarios to test our hypotheses may have limited their generalizability. Indeed, although children tend to respond similarly when they evaluate hypothetical and actual parenting practices (e.g., [McMurtry, Chambers, McGrath, & Asp, 2010](#)), it remains possible that they would evaluate the assessed authority exertion strategies differently when they experience such strategies in their own life. Thus, future research should examine how the current study's findings translate into corresponding behaviors in real-life parent–child interactions. Such research could also consider using multi-item scales rather than single items as was done in the current study. While limiting the number of questions in experimental vignette methodologies is important to prevent a state of weariness in participants, single items can nevertheless restrain the richness of information drawn. This limitation could be particularly important to address for the relative internalization index because this index comprises a combination of multiple constructs (i.e., the two types of reasons to comply assessed in the current study and typically also intrinsic and introjected reasons to comply; [Black & Deci, 2000](#)), all of which should be assessed with multiple items to yield more valid index scores.

Another limitation that would be important to consider relates to the operationalized rule-breaking situations. Specifically, we only investigated authority exertion strategies in response to transgressions involving nonpersonal issues ([Smetana, 2011](#)). Research is now needed to examine how adolescents' beliefs regarding authority exertion strategies vary across issues. In light of past findings, we could expect all constraint strategies to be much less effective to enhance future compliance and internalization in response to transgressions that are perceived by adolescents as personal issues because children of all ages believe that parental implementation and enforcement of rules lacks legitimacy in such situations ([Smetana, 2011](#)). In these rule-breaking contexts, less constraining forms of authority, such as reasoning, may be preferable.

In addition to examining the role of the problem–constraint link in transgressions involving personal issues, research could also explore whether the advantages of logical consequences are similar across different types of nonpersonal issues. For instance, according to social domain theory, adolescents find it generally acceptable that parents intervene in response to both moral and conventional issues but solely believe that parents have a duty to do so in response to moral ones ([Smetana, 2011](#)). Thus, it is possible that adolescents would appraise parents' use of constraints (and their underlying characteristics) differently in response to moral (vs. conventional) issues. More precisely, adolescents could be more inclined to accept parental interventions targeting moral issues regardless of the presence of a problem–constraint link. In contrast, adolescents might be more reluctant to accept

constraints in response to conventional issues such that the presence of a strong problem–constraint link in these contexts would be a more decisive factor in their appraisals of constraints.

In line with this idea, our preliminary analyses revealed that the logical consequence condition was evaluated as significantly more acceptable than the mild punishment condition in the dishes scenario, which pertained more to a conventional issue, but not in the TV scenario, which presented the moral issue of scaring one's siblings (Smetana & Asquith, 1994). Although any interpretation of these findings is speculative at this point (given that other constraint- and transgression-related factors also varied between these two scenarios), it seems possible that the type of nonpersonal issues (i.e., moral vs conventional) has played some role in the observed interactions. Thus, these interaction effects call for additional research on the potential moderating role of the type of issues underlying transgressions (as well as of other constraint- and transgression-related factors) in the socializing impact of parental constraints in addition to highlighting the relevance of exerting some form of methodological control over these potential confounds (as was done in this study).

Finally, future research could evaluate whether logical consequences prompt similar coping strategies as the ones elicited by mild punishments. Past research suggests that adolescents can cope with their parents' controlling practices by *submitting* (i.e., rigidly complying because they feel forced to do so), *showing reactance* (i.e., purposefully engaging in the forbidden behavior), *negotiating* (i.e., openly attempting to align their own goals with their parents' goals), or *accommodating* (i.e., flexibly reconsidering their parents' request in search for its relevance; Soenens, Vansteenkiste, & Van Petegem, 2015). Whereas submission and reactance are argued to lead to detrimental outcomes (e.g., development of internalizing and externalizing problems, respectively), negotiation and accommodation are rather seen as constructive coping strategies that could foster adolescents' adjustment (Van Petegem et al., 2017). Given that adolescents have rated logical consequences as more acceptable than mild punishments and as more likely to elicit relative internalized reasons to comply, one could hypothesize that, although both constraint strategies may be equally effective to elicit future compliance, logical consequences could elicit more accommodation and negotiation, as well as less submission and reactance, than mild punishments.

Conclusion

Parents often wonder how to exert their authority in response to their youths' persistent rule-breaking behaviors. To this day, parents have been advised to respond by explaining the rule's importance and adding a constraint when their explanations are insufficient to induce compliance. However, the impact of constraints as a socializing strategy has been the subject of ongoing discussions, with some studies actually showing neutral or negative effects of such authority exertion strategies on children's internalization process and well-being. The current findings demonstrated that using constraints in response to persistent rule-breaking situations involving nonpersonal issues could be more beneficial when their aim is to address the problem created by the transgression (i.e., logical consequences). In contrast, constraints aiming to make adolescents mind (i.e., mild punishments) seemed more likely to hamper internalization. Future research is now needed to determine whether logical consequences have similar advantages in real-life contexts and in response to transgressions that are perceived by youths as pertaining to personal issues.

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Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jecp.2019.104777>.

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