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Perfectionism in young musicians: Relations with motivation, effort, achievement, and distress

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Abstract

Many musicians experience anxiety and distress when performing, which has been related to perfectionism. Recent findings, however, show that only some facets of perfectionism are associated with anxiety and distress, whereas other facets are associated with positive characteristics and outcomes such as motivation and achievement. To investigate how different facets of perfectionism are related to motivation, effort, achievement, and distress in musicians, 146 young musicians completed measures of perfectionism (striving for perfection, negative reactions to imperfection, and perceived pressure to be perfect), intrinsic and extrinsic motivation, effort, achievement, and distress. Results showed that striving for perfection was associated with intrinsic motivation (intrinsic/identified reasons), higher effort, and higher achievement. Whereas perceived pressure from music teachers was also associated with intrinsic motivation (identified reasons only), negative reactions to imperfection were associated with extrinsic motivation and higher distress. The findings demonstrate that perfectionism in musicians has both positive and negative sides. While negative reactions to imperfection are clearly unhealthy, striving for perfection may be regarded as a healthy pursuit of excellence.

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Keywords: Perfectionism; Musicians; Motivation; Effort; Achievement; Anxiety; Distress

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Music, perhaps more than any other artistic pursuit, demands a high level of perfection from those hopeful of being successful in it. Every aspect of music is directly related to a search for perfection (Dews & Williams, 1989, p. 46).

1. Introduction

Watching talented and skilled musicians perform, many concert goers would imagine that it must be a wonderful experience to be a musician performing in front of an attentive and appreciative audience. However, while they may be aware of the enormous amount of work, motivation, and dedication that is required to become a skilled and versatile musician, few will be aware of the distress that can be associated with being an aspiring musician. Not only do many musicians suffer from performance anxiety (Fehm & Schmidt, 2006), but the constant pressure of musical lessons, practice, recitals, and performance may also lead to somatic complaints and emotional fatigue in young musicians (Dews & Williams, 1989; Shoup, 1995). However, the degree to which musicians experience performance anxiety and other forms of distress may vary depending on their personality characteristics (Rae & McCambridge, 2004). One personality characteristic that has been suggested to contribute to musicians' performance anxiety and distress is perfectionism (Dews & Williams, 1989; Kenny, Davis, & Oates, 2004; Mor, Day, Flett, & Hewitt, 1995). Yet, studies with non-musicians have shown that perfectionism may also be associated with positive characteristics and outcomes such as motivation, effort, and achievement (e.g., Bieling, Israeli, Smith, & Antony, 2003; Mills & Blankstein, 2000; Stoeber & Rambow, 2007). Still, research on perfectionism in musicians so far has focused mostly on the negative aspects of perfectionism. Consequently, the aim of the present research was to investigate what role positive and negative aspects of perfectionism play for motivation, effort, achievement, and distress in young musicians.

Perfectionism is characterized by striving for flawlessness and setting of excessively high standards for performance accompanied by tendencies for overly critical evaluations of one's behavior (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990). Moreover, perfectionists often put great importance on the evaluation of others (Frost et al., 1990; Hewitt & Flett, 1991). Consequently, perfectionists may perceive great pressure to excel because they feel that they have to live up to their own high standards, and to those of others. Thus, it comes as no surprise that perfectionism has been associated with higher levels of anxiety and distress (see Flett & Hewitt, 2002 for a review).

Perfectionism is multidimensional and multifaceted (Frost et al., 1990; Hewitt & Flett, 1991). However, research has shown that two major dimensions of perfectionism can be differentiated: perfectionistic strivings and perfectionistic concerns (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Stoeber & Otto, 2006). The dimension of perfectionistic strivings comprises those facets of perfectionism that may be considered normal, healthy, or adaptive—such as striving for perfection, self-oriented perfectionism, and high personal standards—and has shown associations with positive characteristics and outcomes (particularly, when overlap with perfectionistic concerns is controlled for). In contrast, the dimension of perfectionistic concerns comprises those facets of perfectionism that are considered neurotic, unhealthy, or maladaptive—such as concern over mis-

takes and doubts about actions, socially prescribed perfectionism, feelings of discrepancy between expectations and results, and negative reactions to imperfections—and has shown close associations with negative characteristics and outcomes (see [Stoeber & Otto, 2006](#) for a comprehensive review).¹ Originally, the latter dimension also comprised perceived parental pressure ([Frost et al., 1993](#); [Stumpf & Parker, 2000](#)). Recent studies, however, tend to exclude parental pressure from the perfectionistic concerns dimension and regard it as a separate factor (e.g., [Enns, Cox, & Clara, 2002](#); [Rice, Lopez, & Vergara, 2005](#)).

Differentiating perfectionistic strivings and perfectionistic concerns is important when investigating how perfectionism relates to motivation, effort, achievement, and distress. Regarding motivation, an important distinction is that between intrinsic and extrinsic motivation, that is, whether individuals perceive their actions as autonomous and self-determined or as externally controlled ([Ryan & Deci, 2000](#)). Regarding how perfectionism relates to intrinsic and extrinsic motivation, four studies have been published ([McArdle & Duda, 2004](#); [Mills & Blankstein, 2000](#); [Miquelon, Vallerand, Grouzet, & Cardinal, 2005](#); [Van Yperen, 2006](#)). Of those, three studies investigated how self-oriented and socially prescribed perfectionism ([Hewitt & Flett, 1991](#)) were related to motivation in college students ([Mills & Blankstein, 2000](#); [Miquelon et al., 2005](#); [Van Yperen, 2006](#)). Overall, results showed that self-oriented perfectionism (a core facet of the perfectionistic strivings dimension) is related to both intrinsic and extrinsic motivation, but shows stronger and more consistent relationships with intrinsic motivation. In contrast, socially prescribed perfectionism (a core facet of the perfectionistic concerns dimension) shows stronger and more consistent positive correlations with extrinsic motivation. The fourth study ([McArdle & Duda, 2004](#)) investigated how different facets of perfectionism were related to reasons why adolescents pursue an effortful activity (viz. sport), differentiating autonomous reasons (intrinsic/identified) and controlled reasons (introjected/external). Results showed that personal standards (a core facet of perfectionistic strivings) were related to both autonomous and controlled reasons for pursuing sport. In contrast, concern over mistakes (a core facet of perfectionistic concerns) was related to controlled reasons only.

While these findings suggest that perfectionistic strivings are more closely related to intrinsic motivation and perfectionistic concerns more closely to extrinsic motivation, they come from a small number of studies and thus need further corroboration. In comparison, the number of studies regarding how perfectionism relates to effort, achievement, and distress is much larger. Moreover, the studies' findings are more consistent and show clear differences between perfectionistic strivings and perfectionistic concerns (see [Stoeber & Otto, 2006](#)). Whereas perfectionistic strivings and its facets have shown positive correlations with effort as indicated by time spent studying ([Bieling et al., 2003](#); [Mills & Blankstein, 2000](#)) and with academic achievement as indicated by grades ([Bieling et al., 2003](#); [Stoeber & Rambow, 2007](#)), perfectionistic concerns and its facets have shown consistent positive correlations with indicators of distress such as depression and anxiety, including performance anxiety ([Mills & Blankstein, 2000](#); [Stoeber, Otto, Pescheck, Becker, & Stoll, 2007](#)). Moreover, perfectionistic doubts about actions and feelings of discrepancy between

¹ Self-oriented perfectionism describes perfectionistic strivings motivated by personal high standards whereas socially prescribed perfectionism describes perfectionistic concerns motivated by others' high standards and fear of disapproval from others ([Hewitt & Flett, 1991](#)).

expectations and results (both core facets of perfectionistic concerns) have been found to be related to somatic complaints and emotional fatigue (Hill et al., 2004; Magnusson, Nias, & White, 1996), indicating that it is primarily the facets of the perfectionistic concerns dimension, and not those of the perfectionistic strivings dimension, that are related to distress.

Regarding perfectionism in musicians, two studies have been published so far (Kenny et al., 2004; Mor et al., 1995). In sum, their findings indicate that overall perfectionism is related to higher distress and performance anxiety in musicians and that particularly socially prescribed perfectionism shows high correlations with debilitating anxiety. However, the studies have significant limitations. First, they mainly focused on negative characteristics, particularly anxiety and distress. Moreover, Mor et al. (1995) combined musicians with other performing artists (actors, dancers), whereas Kenny et al. (2004) did not distinguish between different facets of perfectionism and investigated only a small sample of 32 musicians. Consequently, the two studies' findings provide only preliminary insights into perfectionism and distress in musicians, and leave open all questions regarding positive aspects of perfectionism.

Against this background, the aim of the present study was to further investigate how different facets of perfectionism are related to musicians' intrinsic and extrinsic motivation, effort, achievement, and distress. Regarding the two dimensions of perfectionism, two facets were examined: striving for perfection (as a facet of perfectionistic strivings) and negative reactions to imperfection (as a facet of perfectionistic concerns). Previous research with high school students and student athletes has shown that striving for perfection is associated with positive characteristics and outcomes, whereas negative reactions to imperfection are associated with negative characteristics and outcomes (Stoeber & Otto, 2006; Stoeber et al., 2007; Stoeber & Rambow, 2007; Stoeber, Stoll, Pescheck, & Otto, *in press*). Consequently, we expected striving for perfection in musicians to be associated with intrinsic motivation, effort, and achievement and negative reactions to imperfection to be associated with extrinsic motivation and distress. In addition, we examined perceived pressure to be perfect. Previous research has found that parents and music teachers have the greatest influence on young musicians' development and do not only provide support, but may also cause considerable stress (Davidson, Howe, Moore, & Sloboda, 1996; Dews & Williams, 1989; Persson, 1995). Therefore, the present study sought to explore how perceived parental pressure and perceived teacher pressure was related to motivation, effort, achievement, and distress in young musicians.

2. Method

2.1. *Participants and procedure*

A sample of $N = 146$ young musicians (59 males, 87 females) was recruited at two high schools for musically talented students in Saxony-Anhalt and Saxony, Germany. Mean age of participants was 16.2 years ($SD = 1.8$; range: 13–20 years). Questionnaires were administered in the classroom during class time while a school teacher was present to ensure student attendance. Distribution and collection of questionnaires were handled by the second author, as were all instructions. For students under 18 years, informed consent was obtained from the student and one parent; else, it was obtained from the student only.

2.2. Measures

2.2.1. Perfectionism

To measure the different facets of perfectionism, we used the scales that Stoeber and Rambow (2007) had adopted from the Multidimensional Inventory of Perfectionism in Sport (Stöber, Otto, Pescheck, & Stoll, 2004) to measure perfectionism in adolescent school students: five items to measure striving for perfection (e.g., “I strive to be as perfect as possible”), five items to measure negative reactions to imperfection (e.g., “I feel extremely stressed if everything doesn’t go perfectly”), and eight items to measure perceived pressure to be perfect: first presented to measure perceived parental pressure (e.g., “My parents expect my performance to be perfect”) and then to measure perceived teacher pressure (e.g., “My teacher expects my performance to be perfect”) (see Stoeber & Rambow, 2007, for further details & the complete list of items). Participants were instructed to answer all items with respect to their main subject (e.g., piano, violin, singing lessons) on a 6-point scale from “never” (1) to “always” (6).

2.2.2. Motivation

To measure students’ intrinsic and extrinsic motivation, we asked participants to write down two personal goals that they wanted to achieve with their music studies and rate each goal with respect to the four reasons provided by Sheldon and Elliot (1999) (German translation: Lüdtke, 2004): intrinsic (“because of the fun and enjoyment that it provides me”), identified (“because I really believe it’s an important goal to have”), introjected (“because I would feel ashamed, guilty, or anxious if I didn’t”), and external (“because someone else wants me to or because the situation demands it”). For each reason, participants indicated their agreement on a 6-point scale from “do not agree at all” (1) to “agree completely” (6). Following Sheldon and Elliot (1998), intrinsic and identified reasons were combined to a measure of autonomous reasons (intrinsic motivation), and introjected and external reasons to a measure of controlled reasons (extrinsic motivation). While controlled reasons displayed satisfactory reliability (see Table 1), the reliability of autonomous reasons was marginal (Cronbach’s $\alpha = 0.66$). Consequently, we investigated intrinsic and identified reasons separately.

2.2.3. Effort and achievement

To measure effort, participants indicated how many hours per week they usually spent practicing their music on a 6-point scale from “less than 5 h” (1), “5–10 h” (2), “10–15 h” (3), “15–20 h” (4), “20–25 h” (5), and “more than 25 h” (6). To measure achievement, two indicators were used. First, participants indicated which grade they had received in their music subject on their last report. Because grades in Germany range from 1 (“very good”) to 6 (“unsatisfactory”), comparable to grades A–F in US American schools, grades were reversed prior to computing correlations so that higher grades indicated higher achievement. Second, participants indicated how often they had won a “Jugend musiziert” award (i.e., first, second, or third place) in (a) regional, (b) statewide, and (c) nationwide competitions on a 4-point scale comprising the answer categories “never” (0), “once” (1), “two or three times” (2), and “more than three times” (3).² Answers were averaged across (a)–(c) to form an overall measure of number of awards.

² “Jugend musiziert” is an initiative of a government-funded consortium that each year organizes competitions at regional, statewide, and national level.

Table 1
Descriptive statistics

Measure	<i>i</i>	α	<i>M</i>	SD
<i>Perfectionism</i>				
Striving for perfection	5	0.92	3.98	1.37
Negative reactions to imperfection	5	0.89	3.29	1.20
Perceived pressure to be perfect				
Perceived parental pressure	8	0.97	2.14	1.32
Perceived teacher pressure	8	0.92	2.95	1.15
<i>Motivation</i>				
Autonomous reasons				
Intrinsic reasons	2	0.55	5.58	0.66
Identified reasons ^a	2	0.73	5.13	1.02
Controlled reasons	4	0.79	2.26	1.21
<i>Effort and achievement</i>				
Time spent practicing	1	–	3.19	1.31
Grade	1	–	1.68	0.71
Number of awards ^b	3	0.86	1.00	0.93
<i>Distress</i>				
Performance anxiety	11	0.92	3.55	1.13
Somatic complaints	7	0.86	2.32	0.85
Emotional fatigue	6	0.83	2.03	0.86

Note: *N* = 146 (grade: *n* = 145). Time spent practicing = time spent practicing per week; grade = grade received for music studies on last report; number of awards = mean score of number of “Jugend musiziert” awards (see Section 2.2 for details), *i* = number of items, α = Cronbach’s alpha. Except for time practicing and grade (which were single items, thus no α) and number of awards (which was measured on a 0–3 scale), all measures are mean scores (i.e., means across items, not sums across items) with a possible range of 1–6.

^a Transformed scores: *M* = 0.66, *SD* = 0.27.

^b Transformed scores: *M* = –0.62, *SD* = 0.27.

2.2.4. Distress

As indicators of distress, we measured performance anxiety, somatic complaints, and emotional fatigue. To measure performance anxiety, the revised Performance Anxiety Inventory (Rae & McCambridge, 2004; German translation: Eismann, 2006) was used which comprises eleven items measuring how musicians feel in the face of practical exams (e.g., “Even when I’m well prepared for an exam, I feel very anxious about it”). Participants indicated how they usually felt in practical exams on a 6-point scale from “never” (1) to “always” (6). To measure somatic complaints, we combined four items from the Somatic Complaints Scale (Stöber et al., 2004; adapted from Kellmann & Kallus, 2000) measuring general somatic complaints (somatic complaints, head pressure/headache, physical unease, physical fatigue) with three items measuring somatic complaints frequently experienced by young musicians (e.g., muscle/tendons pain, muscle strain, back pain; Shoup, 1995) and asked participants to indicate how often they experienced each complaint after practicing for their music studies on a 6-point scale from “never” (1) to “always” (6). To measure emotional fatigue, we used the Emotional Fatigue (Burnout) Scale (Stöber et al., 2004; adapted from Kellmann & Kallus, 2000) comprising six items (e.g., “I feel emotionally burned out”)

and tailored it to the present context: participants indicated how they usually felt when thinking of their music studies on a 6-point scale from “do not agree at all” (1) to “agree completely” (6).

2.3. Preliminary Analyses

Whereas all measures displayed satisfactory reliability (see Table 1), most scores showed significant skewness. However, when skewness was removed by applying the transformations recommended by Tabachnick and Fidell (2007, Table 4.3), only identified reasons and number of awards showed different patterns of significant correlations for original and transformed scores. Consequently, only for these two variables, transformed scores (identified reasons: $NEWX = 1/7 - X$; number of awards: $NEWX = -1/[X + 1]$) were used in the consecutive analyses.

3. Results

As expected, the four facets of perfectionism showed high intercorrelations (see Table 2), indicating that it was important to control for overlap between facets to determine their unique associations with motivation, effort, achievement, and distress. Consequently, multiple regressions were computed in addition to bivariate correlations.

Regarding motivation, striving for perfection showed a positive correlation with intrinsic reasons and identified reasons (see Table 3). Also perceived parental pressure and perceived teacher pressure showed positive correlations with identified reasons. However, when all four facets were entered simultaneously into a multiple regression predicting identified reasons (adjusted $R^2 = 0.17$), only striving for perfection ($\beta = 0.44$, $p < 0.001$) and teacher pressure ($\beta = 0.27$, $p < 0.01$) remained significant predictors whereas parental pressure was non-significant ($\beta = 0.06$, ns). In addition, negative reactions to imperfection emerged as a significant predictor ($\beta = -0.37$, $p < 0.01$) indicating that—after overlap with the other facets of perfectionism was controlled for—negative reactions to imperfection were negatively related to pursuing music studies for identified reasons. Moreover, negative reactions and teacher pressure showed positive correlations with controlled reasons. However, when all four facets were entered simultaneously into a multiple regression predicting controlled reasons (adjusted $R^2 = 0.06$), only negative reactions to imperfection emerged as a significant predictor ($\beta = 0.34$, $p < 0.01$) whereas teacher pressure was

Table 2
Intercorrelations of perfectionism facets

Measure	1	2	3
1. Striving for perfection			
2. Negative reactions to imperfection	0.66***		
3. Perceived parental pressure	0.35***	0.49***	
4. Perceived teacher pressure	0.40***	0.53***	0.47***

Note: $N = 146$.

*** $p < 0.001$.

Table 3
Correlations of perfectionism with motivation, effort, achievement, and distress

Measure	Striving for perfection	Negative reactions to imperfection	Perceived pressure to be perfect	
			Perceived parental pressure	Perceived teacher pressure
<i>Motivation</i>				
Autonomous reasons				
Intrinsic reasons	0.20*	−0.10	−0.04	−0.11
Identified reasons	0.33***	0.10	0.16*	0.28**
Controlled reasons	0.08	0.26**	0.12	0.17*
<i>Effort and achievement</i>				
Time spent practicing	0.38***	0.23**	0.24**	0.26**
Grade	0.42***	0.14	0.14	0.12
Number of awards	0.17*	0.07	0.17*	0.12
<i>Distress</i>				
Performance anxiety	−0.07	0.21**	−0.07	0.06
Somatic complaints	0.07	0.20*	−0.02	0.08
Emotional fatigue	−0.13	0.19*	0.05	0.10

Note: $N = 146$ (grade: $n = 145$). Identified reasons and number of awards are transformed scores, see Section 2.3.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

non-significant ($\beta = 0.06$, ns). Thus, of all facets, only negative reactions showed a unique relationship with extrinsic motivation.

Regarding effort and achievement, striving for perfection showed positive correlations with both effort (time spent practicing) and achievement (grade, number of awards), conforming to previous findings with non-musicians. However, all other facets also showed positive correlations with effort, and parental pressure also showed a positive correlation with number of awards. Consequently, the four facets were again entered into a multiple regression, this time predicting time spent practicing (adjusted $R^2 = 0.15$). Results showed that only striving for perfectionism was a significant predictor of time spent practicing ($\beta = 0.40$, $p < 0.001$) whereas the other three facets made non-significant contributions ($-0.16 \leq \beta_s \leq 0.14$, ns). A similar pattern emerged when the same procedure was applied to number of awards (adjusted $R^2 = 0.03$): striving for perfection was a marginally significant predictor of number of awards ($\beta = 0.21$, $p = 0.053$) whereas the other three facets made non-significant contributions ($-0.17 \leq \beta_s \leq 0.16$, ns).

Finally, correlations between perfectionism and distress were inspected. In line with expectations, negative reactions to imperfection showed positive correlations with performance anxiety, somatic complaints, and emotional fatigue. This finding indicates that music students, who tend to react with anger, frustration, and depression when their performance is not perfect, have higher levels of performance anxiety, show more somatic complaints, and experience greater levels of emotional fatigue than students who do not tend to react this way. Perceived pressure to be perfect did not show any significant correlations with distress. Thus, in young musicians, it seems that it is not the perception that others expect one's performance to be perfect, but musicians' own negative reactions to imperfection that are associated with higher distress.

4. Discussion

The findings of the present study show that perfectionism plays a prominent role in young musicians' motivation, effort, achievement, and distress. However, not all facets of perfectionism play the same role. Regarding motivation, striving for perfection was associated with autonomous reasons (intrinsic motivation) to pursue music studies, whereas negative reactions to imperfection were associated with controlled reasons (extrinsic motivation). With this, the present findings corroborate previous findings that negative aspects of perfectionism are associated with extrinsic motivation and feeling controlled by others, whereas perfectionistic strivings are related to intrinsic motivation and feeling autonomous and self-determined. Moreover, striving for perfectionism was associated with higher effort and higher achievement, which is in line with the cumulative evidence from studies with non-musicians which show that striving for perfection is a positive characteristic that may help individuals to attain higher achievements (e.g., [Stoeber & Kersting, 2007](#)).

Regarding distress in young musicians, the present study found that negative reactions to imperfection were associated with performance anxiety, emotional fatigue, and somatic symptoms, corroborating findings from previous studies that showed perfectionism to be a personality characteristic related to anxiety and distress in musicians ([Kenny et al., 2004](#); [Mor et al., 1995](#)). However, note that the present findings demonstrate that it is important to differentiate between positive and negative aspects of perfectionism because only negative reactions to imperfection were related to anxiety and distress in musicians, whereas striving for perfectionism was not. Therefore negative reactions to imperfection may be regarded as maladaptive characteristic and a risk to young musicians' physical and mental well-being, but not striving for perfection. Instead, striving for perfection may be regarded as an adaptive characteristic that forms part of a "healthy pursuit of excellence" ([Shafran, Cooper, & Fairburn, 2002](#)).

The present study has some limitations, however. First, regarding motivation, it focused on intrinsic and extrinsic motivation. While these two forms of motivation are of central importance to a person's development and well-being ([Ryan & Deci, 2000](#)), future studies on perfectionism and motivation in musicians should also consider other important aspects of motivation such as individuals' achievement motives and goal orientations ([Stoeber & Rambow, 2007](#); [Stoeber et al., in press](#)). Second, regarding perfectionism, the present findings may be limited to the specific facets of perfectionism investigated. While we are confident that our measure of striving for perfection captures the main aspects of the perfectionistic strivings dimension, our measure of negative reactions to imperfection may not capture all main aspects of the perfectionistic concerns dimension ([Stoeber & Otto, 2006](#)). Consequently, future studies on perfectionism in musicians should include measures that directly address perfectionistic concerns such as concern over mistakes ([Frost et al., 1990](#); [Hill et al., 2004](#)). Finally, the current study was cross-sectional. As a result, it cannot unravel the temporal or causal relationships in the associations investigated. Future studies should therefore employ longitudinal designs to help clarify the temporal and causal relationships between multidimensional perfectionism and motivation, effort, achievement, and distress in musicians.

Nonetheless, the present findings have important implications for the understanding of perfectionism in musicians because they provide first evidence that, in musicians too, perfectionism is a personality characteristic that has both positive and negative implications. Whereas negative reactions to imperfection were associated with external motivation, performance anxiety, and other

forms of distress often experienced by aspiring musicians, striving for perfection was associated with intrinsic motivation, invested effort, and musical achievement. Consequently, the present findings illustrate that perfectionistic strivings do not have to be a source of anxiety and distress. If young musicians do not linger on their imperfections, but focus on striving to achieve the best possible results, then perfectionistic strivings should not preclude musicians from enjoying their artistic pursuit.

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