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The Relationship between Internality and Self-development of Psychology Students: the Effect of Optimistic Attributional Style

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Abstract. *The article represents the research of relationship between internality and self-development in the case of the different levels of optimistic attributional styles. The sample consists of psychology students of Ukraine. The strong positive impact of internality on self-development under conditions of medium optimistic attribution has been revealed. A decrease has also been set in self-development of psychology students with high internality in the case of a highly developed optimistic attributional style. It has been established that the psychology students with a medium level of optimistic attributional style and a high level of internality have the highest scores of self-development. The lowest self-development is typical of psychology students with high internality and pessimistic attributional style.*

Keywords: *self-development, internality, optimistic attributional style, optimism, psychology students.*

Introduction

Due to the reorientation to European educational and professional standards, the emphasis in the training of psychologists in higher education institutions of Ukraine is shifting from externally managed development to self-development.

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The psychological ability of students to self-improvement is an important factor in increasing the professionalism of future professionals as one of the conditions for improving psychological assistance to the population in difficult economic and epidemiological conditions. As is empirically determined, values of self-development are the weighty factor of students' personal self-realization. They correlate with internal learning motivation (Maksimenko & Serdiuk, 2016), professional thinking maturity (Shevchenko & Kuchynova, 2018), ideas about happiness (Stroianovska et al., 2020), life and professional success (Stroianovska et al., 2021).

Readiness for personal and professional self-development has special significance for psychologists, whose specificity of professional activity is that its instrument is the personality of the specialist. Self-development and self-creation are significant determinants of the formation of psychology students' professional orientation (Shevchenko, 2013), and the desire for professional self-improvement is considered an important component of psychological culture (Prorok, 2013). Based on the analysis of scientific sources, we defined the concept of future psychologists' personal and professional self-development as a goal-oriented self-change in the direction of self-improvement and self-correction of professionally important qualities, attitudes, and behavioral strategies. In our opinion, the self-development of psychology students begins with the awareness of the discrepancy of their properties with their own professional ideal, which activates the motivation for self-improvement due to the recognition of responsibility for the success of their professional development. In turn, motivation increases behavioral activity in the correction of character defects and the development of individual psychological and behavioral features useful for future professional activity.

Self-development as an integrated self-determined organized phenomenon is mediated by a set of personality characteristics (Serdiuk & Penkova, 2015). They include internality (internal locus of control). This concept is introduced by Rotter (1966) to denote the internal locus of personality control over reinforcement. It is one of the poles of the construct, in which internality implies a person's expectation of the desired consequences of their own actions based on attributing the causes of successes and failures to themselves, and externality, on the contrary, expectation of significant reinforcements as a result of positive or negative external influence. According to Abdullah (2018), the internal locus of control is determined by the belief that the successes derive from the skills developed and from the work carried out by the person. Individuals with internal locus of control believe that the obtained outcomes are the results of their own actions and abilities. One of internal characteristics is responsibility, that is admission of events to be a result of the attitude or behavior, as well as trying to fix them in order to achieve better results (Munawir et al., 2018). Individuals with a perception of control believe that they have the ability to effectively manage their behavior, so are prone to engage effortful self-regulation for task performance (Apascaritei, Demel, & Radl, 2021). Therefore, internals are more willing to work on self-improvement and self-correction than externals.

Internality is recognized as one of the following factors: the success of self-development in the context of subjectivity (Kuzikova, 2015), the formation of the psychologist's personality (Vare, 2017), their readiness for professional activity (Rekesheva, 2007), using self-improvement aimed strategies for overcoming difficult life situations (Shakhov, 2016). In students' daily lives, internality may be a particularly important resource of solving various educational and job problems (Costantini et al., 2021). Therefore, internality might be called the core of the young person's sense of responsibility as the basis for making personal and professional choices (Łubianka, Filipiak, & Mariańczyk, 2020).

Shulzhenko & Ketler-Mytnytska (2019) established a direct correlation between some indicators of the psychology students' studied properties, in particular internality in professional activity and mechanisms of self-development ($r=0.46$, $p<0.01$ among first-year master students), internality in professional activity and conditions of self-development ($r=0.42$, $p<0.01$ among fourth-year students). However, no strong correlations were found between the overall indicators of the studied properties. This became the basis for the further analysis of the obtained data in order to specify the relationship between the self-development and internality of psychology students.

A review of research has illustrated that the nature of the influence of internality on personal development is ambiguous, especially in case of failure. As Vasiliu (2017) points out, internality may take two forms: responsible and guilt-provoking. High internality is found correlating with stress caused by assuming too much responsibility, unrealistic expectation of the control of all outcomes, feelings of guilt, excessive self-criticism, anxiety, and obsession with control (April, Dharani, & Peters, 2012) and can lead to the manifestations of maladaptation (Karas, 2017). However, it is known that the manifestations of anxiety and stress have a negative impact on mental health, motivation for success, and personal activity to achieve goals (Nechita, Nechita, & Motorga, 2018). While some students improve their academic performance after admitting their guilt for academic failures, others, on the contrary, leave the university because of the conclusion that they are unable to study well.

Heckhausen & Heckhausen (2008) focused on whether a person considers the causes of their difficulties to be controlled. With internal attribution of failure, it is important to be confident in one's own competence, ability to control the causes of the problem to change the situation for the better, otherwise internal attribution can have an oppressing effect on emotional state and even lead to depression. Rean (2016) proposed to divide internal control into "good" and "bad". In his view, the attributional pattern of "bad internal control" implies taking responsibility for causes rather than overcoming failures. At the same time, failures are explained by stable internal causes (such as intelligence and abilities). In this case, internality does not increase the motivation of self-development, but causes concentration on one's wrong actions, words, emotional reactions. A similar opinion was expressed by Shamionov (2009), who argued that overdeveloped internality as the embodiment of social "control" within

the personality makes it rigid and anxious. Such internality provokes the acceptance of responsibility precisely for failure and constant dissatisfaction with oneself. Pessimistic people, even after success, continue to expect future failures because they rely on generalized expectations of negative events (Frager & Fadiman, 2004). Thus, a pessimistic attributional style may be the reason that, even with high internality, the individual is not ready to work constructively on himself/herself.

In contrast, the prerequisite for self-development is one's confidence in the overall ability to improve their mental and personal qualities. According to Gordeeva (2006), an active position on self-development is facilitated by a person's estimation of their qualities, abilities and intelligence as those that can be improved. As established by Henderson & Dweck (1990), the greatest academic success is achieved by those students who believe in the possibility of increasing their intellectual potential, although at first they consider it insufficient. Thus, the internal attribution of bad grades contributes to the self-development of students through an optimistic attitude to learning, being confident in the ability to succeed by increasing perseverance. Similarly, with "good internal control" according to Rean (2016), a person considers himself/herself responsible only for the lack of effort with no doubt in their own ability to solve the problem.

In this regard, we have made assumptions about the importance of the optimistic attributional style as a condition for the positive impact of internality on the psychology students' self-development (Ketler-Mytnytska, 2021). We understand the concept of "condition" as a set of interdependent internal and external circumstances that make possible the formation or development of certain mental processes or personal characteristics (Gruzinskaya, 2017).

Dispositional optimism is associated with one of attributional (explanatory) style, implying explanation of events along dimensions of internal-external, stable-unstable, and global-specific. In addition, the parameters of interpretation of events include their control by the individual. Optimistic attributional style means the explanation of failures by internal, but temporary and specific (arising in exceptional situations) reasons. On the contrary, successes are perceived as stable, global and dependent on the one's efforts (Seligman, 1991). That is why, an optimistic attributional style is called "positive bias for events" (Liu & Bates, 2014). As noted by Abdullah (2018), the word optimism comes from the Latin "optimum", which means "best". In the most typical use the term refers to a mindset in which a person has overall positive expectations in any situation and about the future. In psychological studies, the term is usually used in one of two ways: as expectational (dispositional) optimism or explanatory style. The point is that the mechanism responsible for acquiring optimism-pessimism is supplied by the personal thinking style in the annoying and pleasant situations. This is also known as the optimistic and pessimistic interpretative methods. Optimistic people see that failure is due to some changeable thing, so they are able to succeed in the next time. In this interpretive pattern, the explanations of good or bad past events influence the

expectation to have control over good or bad future events. Optimism means that an individual has such image of the cause of unpleasant situation that supports their ability to control and govern.

Modern studies have reported some relationship between internality, optimism and personal development. More optimistic students have less unsolved problems, are more goal-oriented and able to face the difficulties, to act in a more successful way (Hernández & Esteban, 2017). Individuals measuring high on dispositional optimism and internal work locus of control are prone to improve psychological well-being and self-efficacy, less likely to be insecure at work (Bosman et al., 2005), that might highly likely supply a higher readiness for professional self-development. The combination of university students' optimistic attributional style with the internal locus of control is positive for the following: the focus on acquiring knowledge and mastering the profession (Malimon & Duchiminska, 2012); self-confidence and self-strength (Klibajs, 2014); endurance and resistance to stress (Vasiliu, 2017); academic self-efficacy (Nilson-Whitten, Morder, & Kapakla, cited by Sagone & De Caro, 2014).

However, most studies in that field have only focused on features and correlations of locus of control, optimism and various personal characteristics. Previous studies have not dealt with the influence of optimistic attributional style on the nature of the relationship between internality and psychology students' self-development.

Aim of the research: to study the relationship between internality and psychology students' self-development in case of different optimistic attributional style levels.

Objectives of the research:

- 1) to investigate the nature of the relationship between self-development and internality, internality and optimistic attributive style, self-development and optimistic attributional style of psychology students;
- 2) to empirically reveal the effect of internality on psychology students' self-development in case of different optimistic attributional style levels.

Research hypotheses:

Hypothesis 1:

- H_0 about the absence of a positive influence of internality on the psychology students' self-development;
- H_1 about the presence of a positive influence of internality on the psychology students' self-development;

Hypothesis 2:

- H_0 about the equality of the positive influence of internality on the psychology students' self-development in case of different levels of optimistic attributive style;
- H_1 about the greater positive influence of internality on the psychology students' self-development in case of medium and high levels of optimistic attributive style.

Research Sample

The study was conducted between 2017 and 2019 on the basis of the Classical Private University (Zaporizhzhia), V. Dahl East Ukrainian National University and State Higher Educational Institution “Donbas State Pedagogical University” The sample of the empirical study, made by randomization, was made of 226 psychology students, including 111 fourth-year students and 115 first-year master students. There were 57% females and 43% males aged 19 through 21 ($M = 20$, $SD = 0.71$) among the interviewees. The survey was conducted online with sufficient data security measures.

Methods

We used three psychological techniques: *The Locus of Control Test* (Cronbach's α coefficient of the general scale is 0.76; Ksenofontova (1999)) and *The Dispositional Characteristics of Personal Self-development Questionnaire* (Cronbach's α coefficient of the general scale is 0.7; Kuzikova & Kuzikov (2010)) to set the levels of internality and self-development of psychology students; *The Test of Attributional Styles* by Rudina (Cronbach's α coefficient of the general scale is 0.72; cited by Sychev (2008)) to measure the optimistic attributional style of psychology students. Scores obtained on overall scales were used in all tests. The distribution of diagnostic data by levels, quantitative (score range), and qualitative characteristics of each level was carried out according to the keys of the specified tests.

The obtained data were processed using the following methods of mathematical statistics: *Pearson's correlation analysis* to characterize the relationship of psychology students' internality, optimism and self-development; *two-way ANOVA* to identify the impact of internality on the self-development of psychology students in the case of different levels of optimistic attributional style. Survey data were processed using the IBM SPSS Statistics 21 software package.

Results

To perform the first objective of the research, the nature of the relationship between self-development and internality, self-development and optimistic attributional style of psychology students was established. Descriptive statistics are shown in Table 1.

Table 1 shows that the largest percentage of respondents has a medium level of general internality (42,12 %, $M = 20,75$), while for self-development (43,06 %, $M = 93,99$) and optimistic attributional style (47,43 %, $M = 0,35$) the low level dominates.

Pearson's correlation analysis showed a weak correlation between the overall indicators of self-development and internality ($r = 0.149$, $p < 0.05$). There was no statistically significant relationship between general indicators of self-development and optimistic attributional style ($r = 0.05$, $p < 0.05$). Both variables, internality and

optimistic attributional style, were revealed not to be significantly correlated ($r=0.08$ at $p<0.05$). This can be explained by the fact that these variables do not have a direct relationship, that is, internals can be both optimists and pessimists. At the same time, a significant relationship between self-development and internality ($r = 0.22$, $p < 0.01$) was found in 41.2% of students who have a medium level of optimistic attributional style.

Table 1.

The indicators of psychology students' internality, self-development and optimistic attributional style

Indicators (minimum and maximum points)	Sample (n = 226)		Levels (%)		
	mean	standard deviation	low	medium	high
Self-development, overall scale (30-150)	93,99	7,87	43,06	38,89	17,51
General internality (0-40)	20,75	4,67	36,12	42,12	21,76
Optimistic attributional style (<0-9>)	0,35	1,02	47,43	41,2	11.37

To implement the second objective of the research and test the hypothesis, the effect of internality on the psychology students' self-development in the case of different levels of optimistic attributional style was revealed. Two-way ANOVA was used to determine the nature of the influence on the self-development of the factors "general internality" and "optimistic attributional style".

Table 2.

Evaluation of the effects of internality and optimistic attributional style on the psychology students' self-development

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13848,243a	8	1731,030	38,454	,001
Intercept	1565282,066	1	1565282,066	34772,006	,001
General internality	1049,082	2	524,541	11,652	,001
Optimistic attributional style	6241,598	2	3120,799	69,327	,067
General internality * optimistic attributional style	4197,067	4	1049,267	23,309	,000
Error	9768,381	217	45,016		
Total	2479903,000	226			
Corrected Total	23616,624	225			

a. R Squared = ,586 (Adjusted R Squared = ,571)

Before applying this statistical method, its basic assumptions were tested: the normality of the distribution and the homogeneity of the dependent and independent variable variances. Significance at all levels of general internality and optimistic attributional style according to the Kolmogorov-Smirnov and Shapiro-Wilk criteria ranges from 0.053 to 0.89, which indicates the normality of the distribution. The Livin test ($F = 2,601, p = 0,73$) confirms the homogeneity of the variances. Therefore, the test showed that the basic assumptions of the two-factor ANOVA were fulfilled.

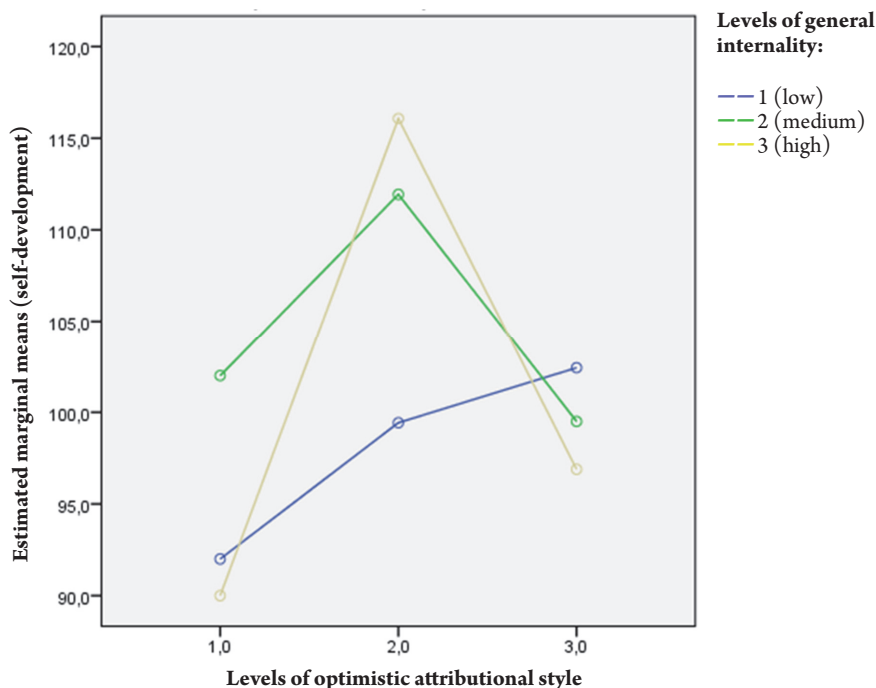
When using the IBM SPSS Statistics 21 software package, the indicators of the overall self-development scale were assigned as a dependent variable (quantitative scale), and the levels of general internality and optimistic attributional style were assigned as independent variables or factors (ordinal scales). For convenience of calculations, the levels of general internality and optimistic attributional style were marked as follows: 1 (low), 2 (medium), 3 (high).

The obtained values of the main effects are shown in Table 2.

As can be seen from the Table 2, the main effect of general internality on self-development ($F(3,036) = 23,309, p = 0,011$) is significant, which indicates the confirmation of hypothesis 1 H_1 .

Figure 1.

The influence of internality on the self-development of psychology students in the case of different levels of optimistic attributional style



The absence ($F(3,036) = 2,652, p = 0,067$) of the main effect of the optimistic attributional style on self-development was also established. In addition, a significant interaction effect ($F(2,412) = 29,327, p = 0,000$) of general internality and optimistic attributional style was revealed. This means that the interaction of internality and optimistic attributional style has the greatest effect on the psychology students' self-development.

We have created a graphical representation of the analyzed data (Figure 1).

According to Figure 1, the levels of optimistic attributional style have a significant effect on the relationship between self-development and general internality. With a low level of optimistic attributional style (pessimism), psychology students with all levels of internality show lower self-development scores. At the same time, individuals with a high level of general internality have the lowest results. At a medium level of optimistic attributional style, students with high and moderate internality show higher self-development than at a high level of optimistic style. At a high level of optimistic attributional style, respondents with high and medium internality show lower self-development than in the conditions of medium optimistic style. For the students with low internality, self-development directly correlates with the optimistic attributional style, so it acquires the highest values at a high level of this trait.

Thus, the obtained data indicate a partial confirmation of hypothesis 2 H1: the positive effect of internality on the self-development of psychology students is greater in the case of only a medium, and not a high, level of optimistic attributional style.

Discussion

The obtained outcomes about the impact of interaction of internality and optimistic attributional style on psychology students' self-development are in line with the previous research findings. As we have shown, low optimism is associated with lower internality and readiness for self-development. This finding is similar to the data of Shylina & Nyzovets (2016) that lower levels of optimism are characteristic of student psychologists who are not ready for further innovation, are less internal and motivated for self-development than students with higher optimism.

Our data on the negative effect of low optimism and high internality on psychology students' self-development are similar to the results of a study by April, Dharani, & Peters (2012). As shown by their research, the leaders endowed with a highly internal locus of control have lower levels of happiness. Such individuals are prone to feel stress, anxiety and fear caused by assuming too much responsibility, self-criticism or perspective of losing control. The research of Ramezani & Gholtash (2015) reveals a weak relationship between locus of control and happiness, too. Thus, pessimistic students with high internality are less prone to self-development than pessimistic students with lower internality. We suppose that very strong self-demands of excessive

internals could restrict their readiness for self-development in case of low confidence in own ability to succeed.

The positive impact of medium optimistic attribution have been shown in a number of studies. Shakhov (2014) proved that the personal optimism is a determinant of motivation of educational and professional activity of students-psychologists. Confidence in one's ability to become a qualified psychologist increases the readiness to meet the challenges of educational and professional growth, reduces the fear of difficulties and responsible professional decisions in the future. Optimism as a belief in one's abilities can be a condition for students' ambitions for future professional success. According to Curic, Petrović, & Vukelić (2018), locus of control of psychology students is positively correlated with ambition and employability. Students' ambition could be regarded as a general indicator of perceived future professional success. Both internal locus of control and ambition lead to proactive behaviors that are relevant for employability and consequently result in professional and personal self-realization.

We also found the negative effect of high optimism and internality on psychology students' self-development. This is consistent with the results of Abdullah (2018) that unrealistic or naive optimism can lead to undesirable consequences. This happens if it causes a passive behavior or, on the contrary, active efforts to change the unchangeable circumstances. Palenzuela (1984) has pointed out that internal expectancy would be less desirable provided that the real situation does not allow an individual to exert control over a planned outcome. Deng et al. (2016) emphasize that while a moderately optimistic explanatory style is adaptive, an exaggerated optimistic explanatory is not. Individuals with highly optimistic explanatory style are more likely than the moderately optimistic to ignore bad outcomes and exaggerates good ones. They exhibit unrealistic illusions in order to maintain positive beliefs about the self. On the other hand, the studies have shown that pessimistic explanatory style correlates with psychological and physical dysfunction, as well as career failure. So both highly optimistic and highly pessimistic explanatory styles are dysfunctional attributional patterns. We assume that psychology students with excessive optimism do not feel the need to change themselves, because they are confident that they will succeed without self-correction.

However, the correlation between strong optimistic attributional style and self-development in case of low internality was also found. One of the possible explanations of this could come out of the relation of external locus of control with learned helplessness. People with external locus of control seem to have cognitive bias toward the perception of a situation as being dangerous and threatening (Žitný & Halama, 2011). That is why, high optimism can provide perceived security for externalists, reduce their anxiety, and, therefore, increase readiness for self-realization.

In general, the highest scores of self-development have psychology students with a medium level of optimistic attributional style and a high level of general internality. The lowest self-development was found in student psychologists with high internality and pessimistic attributional style.

The limitations of our study are a rather narrow age range of respondents (fourth-year students and first-year master students) and testing only in some regions of Ukraine. In addition, variance of two-factor analysis we used allows to draw conclusions about the effect of certain factors, rather than their influence on the dependent variable. Therefore, it is planned to check the data of a sample of psychology students of different courses during the formative experiment.

However, the obtained results can be useful for the organization of educational work with psychology students, aimed at ensuring their personal and professional self-development. According to the results of the literature study, at this time in the practice of psychological support for the self-development of future psychologists, the high potential of the combination for this purpose of activating not only internality, but also the optimistic attributive style is not taken into account. In particular, Tereshchenko provided an increase in the self-development motivation of psychology students due to the formation of their responsibility for the occurrence and resolution of various communicative situations (Tereshchenko, 2017: 220). Zatvorniuk implemented pedagogical conditions for the formation of the future psychologists' readiness for self-improvement by specifying their own professional ideal and the means of its realization, training self-determination, activity, self-organization, etc. (Zatvorniuk, 2016: 282–296). Therefore, the self-improvement of future psychologists was ensured exclusively by stimulating their internal characteristics. In this regard, we consider it expedient to implement into the educational process of psychology students specially developed programs of psychological training, education, and professionally oriented activity aimed at the development of both their internality and optimistic attributive style. We believe that this logic of developing influence is more likely to ensure the personal self-development of future psychologists and, as a result, to improve the quality of their professional training in a higher education institution.

Conclusions

We explored the nature of the relationship between self-development and internality, self-development and the optimistic attributional style of psychology students. There has been a weak correlation between overall indicators of self-development and internality and no correlation between indicators of self-development and optimistic attributional style. However, a significant relationship between self-development and internality has been established only in those students who have a medium level of optimistic attributional style.

We have found the influence of internality on the self-development of psychology students in the case of different levels of optimistic attributional style. It has been established the absence of the main effect of the optimistic attributional style on self-development. When interacting of locus of control with optimistic attributional style the low optimism has been associated with lower internality and readiness for self-

development. At the same time, the lowest rates of self-development have been found in students with low optimism and high internality. The strong positive influence of internality on self-development under the conditions of medium expressed optimistic attribution has been confirmed. In addition, a decrease in the self-development of psychology students with high internality under conditions of a highly developed optimistic attributional style has been found. Exceptions are students the externals, whose readiness for self-development increased under conditions of excessive optimism.

The presented study enriches the scientific works of other authors by the fact that for the first time, it obtained data that clarify the nature of the relationship between internality and psychology students' self-development in case of different optimistic attributional style levels. According to our research, students with high internality in case of medium optimistic attributional style are most prone to self-development. If the student is a pessimist, then high internality causes a decrease in self-development. Similarly, excessive optimism does not promote the self-development of internal students. Thus, an important condition for the positive impact of internality on the psychology students' self-development can be considered a realistic belief in their ability to succeed.

Thus, the first research hypothesis was confirmed: internality has a positive effect on the self-development of future psychologists. The second hypothesis was partially confirmed: internality has a greater influence on the self-development of future psychologists in the case of only a medium, and not a high level of optimistic attributional style. A moderately pronounced optimistic attributional style is a condition for the stimulating effect of internality on the psychology students' self-development. Therefore, it is advisable to conduct with students the educational work and psychological training aimed at improving their internality and moderate optimistic attributions.

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