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## Analyzing the Effect of Need for Achievement and Locus of Control on Student Entrepreneurial Intentions

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### Abstract

This study aimed to analyze the student entrepreneurial intentions model based on their psychological characteristics. More specifically, this study sought to explain whether the Need for Achievement (N-Ach) and Locus of Control (LoC) of students had an effect on Entrepreneurial Intentions (EI). An inferential research design with a cross-sectional study was adopted to collect the data. Students from faculty of teacher training and education, one public university in Jambi, were involved as the sample of the study. 63.14% of male students were selected by using a simple random sampling strategy, dominated by 81.78% of respondents aged less than 20 years. Data were collected through questionnaires and were analyzed by using the statistical correlation software and linear regression models to ensure the relationship between psychological characteristics and EI. The results indicated that there was a positive effect on psychological characteristics and EI on Student Entrepreneurial Intentions. N-Ach and LoC positively affected EI, both partially and jointly. Due to the limited instrument used in this study, only a self-reported questionnaire, which carried an opportunity for the response bias, and involved male students from a faculty in one public university in Jambi. Therefore, this model needs a further development through the incorporation of behavioral characteristics by involving larger samples allowing us understand on whether behavioral theories and traits are conflicting or complementary.

### Keywords

Entrepreneurial intentions, locus of control, need for achievement

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## Introduction

One of the challenges in developing a country is to deal with the problem of unemployment. Data from the Central Statistics Agency (BPS) of the Republic of Indonesia show that the level of unemployment in Indonesia is still very high. The number of unemployed people in Indonesia in August 2017 reached 5.50% of the total population, 264,000,000 people. An alternative way to solve the problem of unemployment is by empowering the community and educated groups through entrepreneurship programs, which are expected to be able to contribute in the absorption of labor to reduce unemployment and state burdens (Adnyana, Agung, & Purnami, 2016). Today, entrepreneurship is seen as a key factor in economic and sustainable development. This contributes to growing the country's competitiveness in its national and international markets, overcoming unemployment as a solution to today's growing problems, and encouraging entrepreneurs in bringing innovative ideas to market and achieving their personal growth (Acs & Szerb, 2010).

Higher education institutions are expected to be able to prepare for a better future by developing intellectual competencies and skills so that the younger generation can carry out self-actualization. This shows that in addition to educational support, concepts and business development support are equally important in encouraging students to have entrepreneurial intentions (Saeed, Yousafzai, Soriano, & Muffatto, 2015). The aim of offering entrepreneurship education at universities is not only to encourage students to start their own businesses but also to make them more creative and innovative (Schmitz et al., 2017).

Higher education also plays a role in producing human resources who have entrepreneurial spirit and attitude in overcoming the problem of unemployment by creating jobs (Genesca` et al., 2003). Entrepreneurial Intentions arise because of its contribution to economic growth, rejuvenation of productive structures, re-launching of certain regions, dynamics of innovative processes and job creation (Schiavone, 2011). Education at the university seeks to shape attitudes, skills, knowledge and competencies to students in order to develop their professional careers. Education, research, and community service are Tridharma used as the main mission in the administration of higher education in Indonesia. Meanwhile, the progress of society and the effect of globalization have added a further mission to the university domain named as economic development (Stauvermann & Kumar, 2017). Aligning all of these missions is a crucial issue to build an entrepreneurial university (Ribeiro et al., 2010), where entrepreneurship can be seen as the center of economic and community progress (Sanz et al., 2017). Other experts have also recognized that entrepreneurship in the educational environment has a significant impact on Entrepreneurial Intentions (Kabok et al., 2017; Martínez-Climent et al., 2018). Thus, universities should now include entrepreneurship education in their curriculum; because it can have direct and indirect effects on skills development; which in turn has a positive effect on Entrepreneurial Intentions (Clara Gieure et al., 2019).

One public university in Jambi, in particular the faculty of teacher training and education has included an entrepreneurial course in its curriculum. As one of the main subjects that must be taken by students, entrepreneurship course not only provides a theoretical foundation on the concept of entrepreneurship but also forms the mindset of students to become entrepreneurs. This means that the university has prepared students to start a new business through the integration of experience, skills, and knowledge that are essential for developing and expanding a new business venture. The existence of Entrepreneurship course can also increase the desire of students to choose entrepreneurship as a career choice to become private employees, civil servants, or state-owned enterprises (BUMN) employees, which can significantly direct students towards entrepreneurial intentions.

From an academic perspective, many studies have examined entrepreneurship and the factors that drive or attract entrepreneurs to start a business. However, as stated by Turker and Selçuk (2009), the majority of studies focused on established entrepreneurs, and little is known about young adults and the factors that drive them to start businesses (Henderson & Robertson, 2000). Referring to the theory of planned behavior (TPB), it suggests that entrepreneurship is about not only intentional but also pre-planned (Kirby & Ibrahim, 2011). This study analyzed the effect of need for achievement and locus of control both individually and jointly on student entrepreneurial intentions. This study enriched research based on the TPB model by considering the entrepreneurial skills or abilities of students, which is obtained at the university. Thus, the model presented here contributes to the literature by including the role of entrepreneurship education as well as the skills and abilities acquired by students. This study showed that education might have an indirect effect on the development of entrepreneurial skills. But in turn it will foster Entrepreneurial Intentions. In this context, the purpose of this research was to analyze the entrepreneurial intentions of students and the factors of psychological characteristics, which influence their intention to become entrepreneurs. This study wanted to test the following hypotheses: (1) H<sub>1</sub>: N-Ach influences EI, (2) H<sub>2</sub>: LoC influences EI, and (3) H<sub>3</sub>: LoC and N-Ach influence EI.

## Literature Review

### *Entrepreneurial intentions (EI)*

In recent years, entrepreneurship has been a major thing for job creation and economic growth. Government and educational institutions' interest show an increase in promoting entrepreneurship. Many universities consider that investing in entrepreneurship education is very important for social and economic development in society (Garrido-Lopez et al., 2018). Such education can help to develop students' knowledge, skills, and intentions to start a business (Ilonen et al., 2018). Theory of Planned Behavior (Ajzen, 1991) suggests

that intention is a strong predictor of behavior (Ajzen et al., 2009). If applied to entrepreneurship, intention is affected by general attitudes or entrepreneurial perceptions, normative evaluation of being an entrepreneur, and the feasibility of conducting entrepreneurial behavior (Krueger, 2017). However according to Shapero's (1982), Entrepreneurial Event Model (EEM) proposes that entrepreneurial intentions are dependent on the perception of entrepreneurial desires and eligibility and the tendency of individuals to act. Entrepreneurial Intentions can be interpreted as the initial step of the process of establishing a business that is generally long-term in nature. It is a motivating factor that influences individuals to pursue entrepreneurial results. Intention is a determination to carry out certain activities or produce certain conditions in the future. Entrepreneurial Intentions are the desires that exist in a person to show entrepreneurial behavior (Farida & Mahmud, 2015). Intention is the best predictor of a person's entrepreneurial behavior. Intention is very important for students to become entrepreneurs (Vemmy, 2012). This means that Entrepreneurial Intentions is defined as the desire that exists in a person to display entrepreneurial behavior that can be seen from the desire of individuals to be able to take risks, take advantage of opportunities, become a creative and independent person and be able to process existing resources.

Intention is a critical first step to starting and running your own business (Krueger, 2017). Characteristics, factors, and processes that lead to intention have an impact on the initial formation and subsequent direction of new ventures (Bird, 2015). Various factors have been identified as influencing entrepreneurial intentions including personality dimensions, need for achievement, need for autonomy, innovation, stress tolerance, risk taking, resilience and locus of control (Ahmed et al., 2010; Brandstätter, 2011). Self-efficacy is also consistently related to Entrepreneurial Intentions (Mauer et al., 2017). Previous research also found that Entrepreneurship Education positively and significantly affects perceived desirability, entrepreneurial self-efficacy and entrepreneurial intentions. Perceived desirability and entrepreneurial self-efficacy positively and significantly affects entrepreneurial intentions (Suratno, Ekawarna, & Kusmana, 2019).

### ***Need for achievement (N-Ach)***

Based on McClelland's (1961) motivation theory, need for achievement is defined as the desire to do something better or more efficiently than what has been done before. McClelland (1961) said that in some businesses, the need to excel is so strong and it is more motivated than to achieve profit. To maximize satisfaction, individuals with a high need for achievement tend to set goals for themselves that is a challenge but can be achieved. Although these individuals do not avoid risks completely, they assess risks very carefully. Individuals who are motivated by need for achievement do not want to fail and will avoid tasks that involve too much risk. Individuals with low need for achievement generally avoid challenges, responsibilities, and risks (Wiratmo, 2018).

Need for achievement can also be interpreted as a desire to complete a task with a target more effectively. Individuals who have a high need for achievement tend to set quite

difficult goals and make more risk in the decisions making (Griffin & Moorhead, 2013). Setyawan (2015) argues that the level of need for achievement will make someone able to overcome all obstacles, to produce high quality work, and to compete to be the best. In fact, students admit that it is still difficult to find ideas for entrepreneurship, and do not dare to be entrepreneurs because they do not have the capital and are afraid of the risk of failure, because they have formed a mindset of failure with the risk of entrepreneurship and they feel less confident that they can succeed. Davidsson and Wiklund (1999) state that need for achievement is not an important cause of entrepreneurial behavior. According to them, the concept of need for achievement is unclear in its definition, and has problems in measurement. However, several other researchers have found a relationship between need for achievement and entrepreneurial behavior (Davidsson, 1989), and consider this need for achievement an important factor (Beverland & Lockshin, 2001). Likewise, the research results of Dinis et al. (2013) showed that there was an influence between (some) psychological characteristics on entrepreneurial intentions. The propensity to risk negatively affects entrepreneurial intentions; meanwhile self-confidence and the need for achievement positively affect entrepreneurial intentions.

### *Locus of control (LoC)*

Locus of control refers to the extent to which people expect that reinforcement and other things depend on their behavior or personal characteristics (Allen, 2003). Someone who considers good and bad events to be the result of what they do is called as an internal locus of control. Whereas, individuals who consider events in life based on external forces that control such as the result of luck, chance, fate, or the strength of others are called as an external locus of control. Someone with an internal locus of control has responsibility for the actions and accepts responsibility for the results. Whereas, someone with an external locus of control tends to blame others or say what happened is the result of other events originating from outside themselves.

Correspondingly, Rapi and Juaini (2015) suggest that as an event experienced by someone as a reward or reinforcement, it can be stated that each individual has a different locus of control and also causes different reactions in each individual. Locus of control is one of the factors that determine individual behaviors and it is defined as a description of one's beliefs about the source of behavior. As a personality dimension, it explains that individuals who behave are influenced by expectations about themselves. When someone perceives that locus of control is within him or her, he or she will produce greater achievements in their lives because they feel their potential can be utilized so that they become more creative and productive. This shows that the locus of control is a person's beliefs about the existence of his control, and how much control he has on the successes and failures he experiences and the situations or events that exist in his life.

According to Primandaru (2017), one of the factors related to the success of entrepreneurship is the locus of control. Locus of control is a person's belief about the existence of self - control, and how much control he/she has over the successes and failures

he/she has experienced and the situations or events that exist in his/her life. Confidence here is a belief in need for achievement. Locus of control is an individual's beliefs about the relationship between behavior and the consequences it has (Ninik, 2015). Locus of control represents the extent to which individuals believe that their achievement depends on their own behavior. Appropriate individuals consider that the achievement of goals or objectives depends more on their own abilities and actions, not the luck or efforts of others (Kuip & Verheul, 2003). Longitudinal studies by Brockhaus (1980) show the existence of a positive correlation between orientation to the locus of control and entrepreneurial success. In other studies, Brockhaus and Horwitz (1986) reinforce how locus of control can distinguish successful entrepreneurs from unsuccessful entrepreneurs. Robinson et al. (1991) states that internal control leads to positive entrepreneurial attitudes and most students who obtain entrepreneurial learning can develop a higher level of control and self-efficiency.

## **Methodology**

### ***Research design, respondents, and locale of the study***

This study aimed to analyze the effect of need for achievement (N-Ach), locus of control (LoC), on Entrepreneurial Intentions (EI) in one public university in Jambi, Indonesia. Thus, this study adopted inferential research designs. This was a cross-sectional study as the data in this study were collected at one point of time. Respondents of this study were students of the teacher training and education faculty in one public university in Jambi from six study programs included economic education, English education, educational administration, elementary school teacher education, *pancasila* and citizenship education, and biology education that have implemented an entrepreneurial curriculum.

Respondents were students who had taken entrepreneurship courses, had attended entrepreneurship learning and practice courses, and had graduated from taking entrepreneurship courses. Of the 575 eligible students, a sample of 236 students (54.31% male students and 45.69% female students) was selected. They were willing to collaborate to voluntarily participate by filling out an online questionnaire. Participants were guaranteed anonymity and were welcome to leave their contact number if they were wished to participate in a follow-up study.

### ***Data collection and analysis***

The instrument for measuring all research variables in this study adopted the Entrepreneurial Intention Questionnaire (EIQ) Version 2.05, from Liñán and Rodríguez (2015). The number of the themes and scales were adapted to the needs of on-line data collection and characteristics of students in Indonesia. After adaptation, the items were translated into Indonesian.

*Entrepreneurial Intentions.* All items were measured by using a 5-point Likert scale with response options ranging from 1 (strongly disagree) to 5 (strongly agree). An example of an

item was EI-1; I want to open my own business field after graduating from college, EI-10; I like to find information about the business world, especially from people who experienced. The Cronbach's alpha for the scale was 0.877.

*Need for Achievement.* All items were measured by using a 5-point Likert scale with response options ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items included N-Ach-1; I like challenging but high-risk work, N-Ach-10; I need feedback for every job I do. The Cronbach's alpha for the scale was 0.838.

*Locus of Control.* All items were measured by using a 5-point Likert scale with response options ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items included LoC-1; I have confidence in the ability to realize my dreams in entrepreneurship, LoC-10; I need family support to motivate me in entrepreneurship. The Cronbach's alpha for the scale was 0.843.

Using statistical software, data were analyzed to determine whether there is a relationship between variables. Following the accepted standards adopted by several researchers (Harris & Gibson, 2008; Koh, 1995; Keat et al., 2011), we measured the correlation between variables and linear regression models between independent variables and variables dependent.

## **Findings**

### ***Sample characteristics***

Characteristics of the sample were presented in Table 1. The sample was dominated by men (63.14%). As many as 81.78 percent of respondents were less than 20 years old, and 68.64 percent of them did not have a family business background. Most respondents (78.39%) had attended special entrepreneurship training.

**Tabel 1.** *Summary of descriptive statistic sample characteristics*

	<b>Variables</b>	<b>Obs</b>	<b>Number</b>	<b>Percentage</b>	<b>Cumulative</b>
Merge	Male	149	236	63.14	63.14
	Female	87		36.86	100
Age	<20	193	236	81.78	81.78
	>21	43		18.22	100
Family Background	Entrepreneur	74	236	31.36	31.36
	Non- Entrepreneur	162		68.64	100
Entrepreneur Training	Ever	185	236	78.39	78.39
	Never	51		21.61	100

### ***Validity and reliability***

Validity was obtained by looking at the correlation between constructs or factors. Items must correlate more strongly with their own constructs than with others, indicating

that they are regarded by respondents as their own theoretical constructs (Messick, 1988). The results in Table 2 show the correlation matrix between the predictor constructors. All constructs, EI, N-Ach, and LoC, correlated strongly with their own constructs. All variables had a positive and significant correlation.

Leech et al. (2005) suggest that reliability is an indicator of the extent to which item differences, measurements, or judgments are mutually consistent, as an ongoing process in which one item provides evidence to support conformity, meaningfulness; and the specific use of conclusions made from scores about individuals from the sample and given context. The approach used to test two important assumptions is Cronbach's alpha - because it is believed to be the most common measurement of reliability scale (Andy, 2005). Under these conditions, alpha values ranged from 0.877 to 0.838 (Table 2). Therefore, surveys can be considered reliable.

**Table 2.** *Summary of test validity and reliability results*

Variable	Item	Correlation			Reliability	
		r	Sig.	Status	Alpha Cronbach	Status
Entrepreneurial Intention	EI-1	.52798**	.000	Valid	.877	Reliable
	EI-2	.53735**	.000			
	EI-3	.59642**	.000			
	EI-4	.61462**	.000			
	EI-5	.54417**	.000			
	EI-6	.60242**	.000			
	EI-7	.58284**	.000			
	EI-8	.64538**	.000			
	EI-9	.63203**	.000			
	EI-10	.59129**	.000			
Need for Achievement	N-Ach-1	.48158**	.000	Valid	.838	Reliable
	N-Ach-2	.47964**	.000			
	N-Ach-3	.50718**	.000			
	N-Ach-4	.53347**	.000			
	N-Ach-5	.56567**	.000			
	N-Ach-6	.49506**	.000			
	N-Ach-7	.55858**	.000			
	N-Ach-8	.51407**	.000			
	N-Ach-9	.50674**	.000			
	N-Ach-10	.58763**	.000			
Locus of Control	LoC-1	.52505**	.000	Valid	.843	Reliable
	LoC-2	.48161**	.000			
	LoC-3	.55542**	.000			
	LoC-4	.55195**	.000			
	LoC-5	.59111**	.000			
	LoC-6	.61937**	.000			
	LoC-7	.57797**	.000			
	LoC-8	.49716**	.000			
	LoC-9	.57611**	.000			
	LoC-10	.49134**	.000			

\*significant at 0.05, \*\*significant at 0.01

*Hypothesis testing*

The correlation matrix presented in Table 3 shows that there was a positive relationship between the predictor variables and the dependent variable. The correlation coefficient between N-Ach and EI was 0.792, LoC and EI was 0.741 indicating everything was positive and significant. Table 3 correlation coefficients only show the relationship between variables, but did not give an indication of the direction of causality. Therefore, to determine the direction of quality, the hypothesis was tested by applying linear regression. With the help of the SPSS release 22.0 application, the results were presented in Table 4.

**Table 3.** *Summary matrix correlations*

		Entrepreneurial Intentions
Need for Achievement	Pearson Correlation	.792**
	Sig. (20tailed)	.000
	N	236
Locus of Control	Pearson Correlation	.741**
	Sig. (20tailed)	.000
	N	236
Entrepreneurial Intentions	Pearson Correlation	1
	Sig. (20tailed)	.000
	N	236

**Table 4.** *Summary hypothesis test*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. error	Beta		
1 (Constant)	9.845	3.479		2.830	.005
Need for Achievement	.880	.044	.792	19.850	.000
2 (Constant)	12.321	3.939		3.128	.002
Locus of control	.840	.050	.741	16.897	.000
3 (Constant)	6.233	3.602		1.730	.085
Need for Achievement	.654	.084	.589	7.789	.000
Locus of control	.270	.086	.238	3.149	.002

Based on Table 4, it shows that the direction of causality between variables was positive and significant, indicating that all proposed hypotheses were accepted. This meant that there was a positive and significant influence between N-Ach on IE, as well as LoC on IE. Based on the results of the analysis of the study obtained a coefficient so that it can form the equation  $Y = 6.233 + 0.589X_1 + 0.238X_2 + e$ . From the multiple linear regression equation, a constant of 6.233 was obtained, meaning that if the EI variable was affected by the two independent variables (N-Ach and LoC) then the magnitude of EI is 6.233. The magnitude

of the regression coefficient for the N-Ach variable of 0.589 was positive, meaning that when N-Ach has increased or added by one unit, it would cause an increase in EI of 0.589 with the assumption that the LoC was fixed or the same. Then the LoC regression coefficient of 0.238 was positive, meaning that at this time the LoC has increased or added by one-unit would cause an increase in EI of 0.238 with the assumption that N-Ach was fixed or the same.

### Discussion

This study explained the effect of psychological characteristics on EI; the results indicated that there was a significant positive effect between N-Ach on EI, LoC on EI which meant that the higher N-Ach funds or LoC, then the resulting EI would also be higher. The results of this study were in line with research by Nizma and Siregar (2018) who found LoC, N-Ach, and risk taking as variables that had a significant effect on EI. LoC had a direct positive effect on EI (Afifah, 2015). N-Ach enables one to overcome all obstacles, produce high quality work, and can compete to be the best. In this case, the meaning will increase EI. Besides, personality characteristics such as N-Ach are one of the personality characteristics of someone who will encourage someone to have an EI (Setyawan, 2015). Basically, LoC is a belief that an individual has about the cause or factor of an event in life whether it is a success or a failure in achieving a hope or a desire. These factors can come from within themselves such as behavior or effort that has been done and other factors can be due to luck, or opportunity factors.

These two results make it clear that to increase the level of entrepreneurial intentions, efforts must focus on two different directions: first, making entrepreneurship become an attractive career for students, for example, by presenting entrepreneurs as role models, emphasizing the benefits of entrepreneurship, developing a culture that supports entrepreneurship and, secondly, develop entrepreneurial abilities and confidence. Regarding this latter aspect, given that psychological characteristics are closely related to self-esteem, it is important to note that special efforts are needed to strengthen this aspect in entrepreneurial learning, because as mentioned by Scott et al. (1996), as students get older, their self-esteem decreases.

This result was also in line with the conclusions by Bakotic and Kruzic (2010). According to these researchers, the entrepreneurship education program contributes to increasing perceptions about important aspects of entrepreneurship, as well as creating a realistic vision of entrepreneurial problems. Thus, the researcher advocates the need for permanent education for students, which should focus on developing additional competencies and skills needed later in the market context. Regarding the relationship between psychological characteristics and entrepreneurial intentions, our results indicated that a relationship did exist. In addition, many studies support a positive correlation between orientation to LoC and entrepreneurship (Begley & Boyd, 1987; Beverland & Lockshin, 2001; Brockhaus, 1980; Brockhaus & Horwitz, 1986; de Vries, 1977; Robinson et al., 1991).

Likewise, the evidence from the literature review suggests how entrepreneurs are significantly more innovative than non-entrepreneurs (Robinson et al., 1991).

The purpose of this study explained the understanding of whether students had entrepreneurial characteristics and whether these characteristics were related to entrepreneurial intentions. The results indicated that students had entrepreneurial characteristics at a fairly high level, such as innovation, locus of control, need of achievement and tolerance for ambiguity, but this had nothing to do with the intention to start a business. Previous studies have shown that these characteristics are important features of entrepreneurs and should be incorporated into entrepreneurship education (Jusoh et al., 2011; Neck & Greene, 2011). Bearing this in mind, the challenge for educators at this stage is to preserve or to enhance these psychological characteristics, while simultaneously making students more confident, more aware about, and more interested in entrepreneurial careers. In other words, it is necessary to develop motivation to become an entrepreneur (including specific motivational characteristics such as locus of control and self-efficacy beliefs) as a key aspect in developing an entrepreneurial curriculum, because, as mentioned by Somuncuoglu and Yildirim (1999), motivation is the driving force for student learning goals.

### **Conclusion, Limitations, and Further Research**

The results indicated that there was a positive effect on psychological characteristics and EI on Student Entrepreneurial Intentions. N-Ach and LoC positively affected EI, both partially and jointly. In interpreting the results of the study, we can point out some limitations regarding methodological aspects. First, this study used a self-report questionnaire, which brings opportunities for response bias. Second, the sample only included students from one Faculty. In addition, the sample size was relatively small. These two factors suggested several precautions in the generalization of our results. Furthermore, it should also be noted that the measurement scale used needs to be re-tested for future studies. Discriminatory validity was not clear on all indicators, with some of them showing high cross-loadings in other constructions. There were also some limitations associated with entrepreneurial intentions. Because, some authors in the line of behavioral research carried out by Gartner (1989) stated that behavioral characteristics were more important than psychological characteristics, because entrepreneurship is more related to actions that result from behaviors, and behavior is more easily changed than personality. However, other researchers assume that there is actually a relationship not only between both behavior and entrepreneurship but also between psychological and behavioral characteristics. This relationship is not considered in this work.

Based on the previous explanation, directions for future research may need to be proposed. Considering methodological aspects, this study should be replicated by including more faculties and more students as respondents to ensure generalization of the results. Future research should also consider the limitations of the other methodologies mentioned to improve the reliability and validity of the results. Regarding the content aspect, the model should be developed through the incorporation of other types of variables, specifically those

related to behavioral characteristics. This will enrich the study of the relationship between psychological characteristics, behavioral characteristics and entrepreneurial intentions.

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