Relationship between Empathy and Psychological Well-being across Indian Designers- A Pilot Study

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Abstract

The Design thinking is a human-centric, problem-solving approach. One of the important stages of design thinking process is empathy. Empathy is essential in forming relationships with others and also acting humanely. A psychologically healthy individual has positive feelings about themselves and is hopeful about the future. Empathic people include humanitarian relief workers, therapists, doctors, journalists, and others whose jobs need them to open up to others' suffering. They may, however, come to experience the anguish of individuals they assist or whose experiences they chronicle. As a result of this "emotional residue", individuals may shut down, burn out, and become less eager or able to offer. This gives a clue that there is a relationship between empathy and psychological well-being. Previous researchers studied the relation between empathy and psychological well-being focusing only on nurses and medical practitioners. Hence the present study focused on the relationship between empathy and the psychological well-being of designers who are assumed to be empathetic by profession. The results of this study revealed that there is a positive correlation between empathy and the psychological well-being of the designers, the higher the empathy, and better psychological health. The results of this study also revealed that no correlation exists between empathy and the age of the designers.

Keywords

Design Thinking, Empathy, Psychological Well-being, Correlation Coefficient, Toronto Empath Scale, Warwick-Edinburgh Mental Well-being Scale.

Introduction

Design Thinking is a process that looks at providing solution-based approaches to various problems (Figueiredo, 2021). DT is the practice of diverse teams applying design methodologies to a variety of innovation challenges (Guldmann et al., 2019). According to Guldmann et al. (2019), this innovation model has recently received a lot of support and at the same time a lot of critique from academics and design practitioners. Design thinking helps in solving a variety of problems, tough challenges, and undefined tasks.

In order to connect people's aspirations, the promise of technology, and the necessity for economic success, Brown (2008) defines Design Thinking as a human-centered approach to innovation. Accordingly, design thinking, as defined by Goodwin (2011), Suciu and Baughn (2016), and Merholz et al. (2008), is a human-centered approach to innovation based on understanding client needs, quick prototyping, and the generation of innovative ideas that will change how products, services, processes, as well as how organisations are developed (Johansson-Sköldberg et al., 2013; Shapira et al., 2017; Tschimmel, 2012). Utilising design thinking enables businesses to base decisions more on what customers want than on previous data.

The Stanford Design Thinking model, developed by the Hasso Plattner Institute of Design at Stanford, is a model of Design Thinking that is frequently used to address issues. The institute lists the following as the five stages of design thinking: Empathize, Define, Ideate, Prototype, and Test. The very first stage of design thinking is empathy.

The main objective of Empathize stage is to understand the users empathetically. Design thinkers need to understand their needs and the things that users really care about. For this, a design thinker must remove all their personal assumptions about the problem which they are going to solve. To understand the users empathetically, they should conduct the interviews to know users' interests, experiences, and for what they will give value and what motivates them. Design thinkers should completely understand and feel the environment that envelops the problem. Considering these facts, Design Thinking approach is called a Human-centered approach to solve problems. This stage is a very crucial stage and Design Thinker must collect a considerable amount of data or information and synthesize it, which can be used in subsequent stages of the Design Thinking process. In order to advance the best understanding of the customers, their wishes, and the challenges that cause the development of that specific product, a significant amount of data is collected at this stage to be used throughout the subsequent stage (Plattner et al., 2017; Siang, 2017).

Now the present research question is whether or not empathy and mental health or psychological well-being have a relation. Hence the present work focused on the establishment of the relation between empathy and the psychological well-being of designers. The following section presents a brief review of the relationship between empathy and psychological well-being of different professions available in the literature.

Literature Review

Empathy is the highest form of knowledge. To empathize one must employ all their cognitive and emotional resources to understand and relate with others. Empathy facilitates stronger interpersonal connections, improved communication, and peaceful dispute resolution, all of which contribute to a more varied and inclusive society. According to Bill Bullard, *Opinion is really the lowest form of human knowledge. It requires no accountability, no understanding. The highest form of knowledge… is empathy, as it requires us to suspend our egos and live in another's world. It requires profound purpose larger than the self-kind of understanding*.

Empathy is defined as the ability to identify, understand, and share another person's feelings and thoughts (Eisenberg & Miller, 1987). Empathy is essential in forming relationships with others and also acting humanely. People who habitually prioritize others' thoughts and perspectives over their own may feel empty or alienated, and develop generalized anxiety or low-level sadness. The two primary elements of empathy are emotional empathy and cognitive empathy.

Emotional empathy refers to the emotional response to other people's emotions, which involves producing emotional experiences similar to others, while cognitive empathy refers to understanding the reasons behind other people's emotional states (Fan et al., 2011; Miklikowska et al., 2011; Smith, 2017).

An individual or group's condition, such as their social, psychological, spiritual, economic, or medical state, is referred to as their well-being in general. The ideal definition of the psychological well-being is difficult to articulate although the bulk of prior studies have defined it as being satisfied with one's life or how people view their lives (Pavot & Diener, 1993; Diener et al., 1999; Van Praag et al., 2003) The subjective feelings of contentment, enjoyment, satisfaction with life's experiences and one's role in the workplace, a sense of achievement, utility belongingness, and lack of anxiety, dissatisfaction, or worry, among other things, are what Pavot and Diener (1993) define as well-being. Salami (2010) defined psychological well-being as a state that arises from being satisfied with one's physical health, who they are as a person, and their close relationships. According to Gough and McGregor (2007), *What people are notionally capable of doing and being, as well as what they have actually been capable of doing and being*, constitutes well-being.

Empathy is also strongly associated with a common definition of psychological well-being too. Usually, psychological well-being is defined as the strive for perfection that reflects the realization of one's full potential. (Shanafelt et al., 2005; Thomas et al., 2007; Wei et al., 2011; Boyraz & Waits, 2015; Manczak et al., 2015; Ryff & Keyes, 1995). Nevertheless, the definition of well-being differs among studies (eudaimonic and hedonic well-being; Ryan & Deci, 2001). Also, according to Jovanovic (2015) and Singh and Junnarkar (2015), psychological well-being has a favourable relationship with both mental health and quality of life. According to certain studies, job burnout and emotional exhaustion are adversely correlated with the total score of empathy ability (Qi et al., 2011), and workplace violence lowers empathy ability and has a significant impact on job burnout levels (Li & Li, 2016).

The studies on the relationship between empathy and psychological well-being are of different professions presented in the literature were, nurses (Reynolds & Scott, 2000; Bourgault et al., 2015; Lorber et al., 2020; Martos Martínez et al., 2021; Román-Sánchez et al., 2022), medicine residents (Shanafelt et al., 2005), medical students (Wei et al., 2011; Wu et al., 2021), social workers (Moudatsou et al., 2021), healthcare workers (Soler-Gonzalez et al., 2017), psychotherapists (Laverdière et al., 2018). The association between empathy and well-being across emergency nurses was researched by Bourgault et al. (2015). Their research showed that emergency room nurses appeared to have poor empathy levels. Additionally, their sample revealed high levels of psychological discomfort and poor levels of well-being. Both empathy and well-being are believed to be correlated among the factors they considered, and they discovered greater empathy ratings in nurses with better well-being.

Román-Sánchez et al. (2022) investigated among the Spanish mental health nurses' burnouts, empathy, and attitudes towards mental illness. Their results showed a positive correlation between empathy and almost all the study variables, and only the exception with the personal achievement dimension of burnout and the dimension of social restrictiveness and authoritarianism of attitudes towards mental illness, a negative correlation was noticed. Wu et al. (2021) investigated the mediator roles of resilience and psychological well-being in the relationship between medical students' empathy and profession expectations. Their findings showed that, through sequential mediating impacts of resilience and psychological well-being, empathy has an effect on the occupation expectations of medical students.

Most of the studies presented in the literature were focused on nurses, medical practitioners, health care and social workers. Hence the present study focused on the designers who are assumed to be empathetic by profession. The main objectives of the present study are;

- To assess the empathetic emotion of designers.
- To assess psychological well-being designers.
- To establish the relation between empathy and the psychological well-being of designers.
- To establish the relation between empathy and the age of designers.

Methods and Materials

This study has a descriptive nature and a survey research method is used.

Selection of the Sample
Sample size for this pilot study is 40 and chosen across the different states of India and working in the fields of fashion, interior, and product designing.

Data Collection
This involves personal data schedule.

Tools used
1. Toronto Empathy Questionnaire
2. Warwick- Edinburgh Mental Well-being Scale (WENWBS)

Toronto Empathy Questionnaire
A 16-item test of empathy, the Toronto Empathy Questionnaire evaluates a person's capacity to comprehend others' emotions, communicate effectively emotionally, and encourage pro-social action. According to the Toronto Empathy Questionnaire (TEQ), empathy is mainly an emotional process. The TEQ showed strong convergent validity in three trials, associating positively with behavioral measures of social decoding, adversely with a measure of autism symptomatology, and positively with self-report measures of empathy. Additionally, it demonstrated strong test-retest repeatability as well as good internal consistency. The TEQ is a quick, accurate, and valid tool for measuring empathy.

Warwick-Edinburgh Mental Well-being Scale (WENWBS)
The Warwick-Edinburgh Mental Wellbeing Scales were created to make it possible to assess projects, programmes, and policies aimed at enhancing mental wellbeing as well as to measure mental wellbeing in the general population. Five response categories make up the 14-item WEMWBS scale, and their aggregate yields a single score. The concept is made more approachable by the items' positive wording and coverage of both feeling as well as functioning aspects of psychological wellbeing. The scale has received extensive national and worldwide use for project and programme evaluation, monitoring, and research into the factors that influence mental health. The 14-item WEMWBS scale is fairly straightforward to score. The score for each of the 14 things is added up to get the overall score. Each item is scored between one and five, and the overall score can range between 14 and 70. Since the WEMWBS has been compared to reliable depression scales, it is possible to provide scores that are similar to cut points for both possible and likely clinical disorders.

WEMWBS has been evaluated using the highly correlated CES-D. (.84).

Using CES-D=26 and CES-D=16 as cut points suggests that;

- A score of 41-44 is indicative of possible/ mild depression
- A score of <41 is indicative of probable clinical depression.

Personal Data Schedule
Personal data schedule was prepared that consists of the socio-demographic information about the subject such as their age, gender, and education.

Hypothesis chosen in this study.

- There is a significant correlation between empathy and psychological well-being across the designers.
- There is a significant correlation between empathy and age of the designers.

Operational definitions used in this study.

- Designers: Refers to people working in the fields of fashion, interior, or products working in Government/ Semi-Government or Private organisations.
- Empathy: Empathy is the ability to identify, understand, and share another person's thoughts and feelings as their own.
- Psychological well-being: Refers to the judgments and evaluations that an individual makes for improving the quality of life.

Statistical Analysis

Statistical methods used in this study are mean and standard deviation and the relationship between the variables empathy and well-being were analyzed using Pearman's Correlation Coefficient, Spearman's Correlation Coefficient and Kendal's tau. SPSS software was used in this study for all the data analysis.

Results and Discussions

Scores on empathy and psychological well-being of designers are shown in Table 1 and Figure 1 and 2. Horizontal lines in Figure 1 shows the average lower and upper limits of scores on empathy, above the line shows higher empathy levels (above 47) and below the bottom line shows lower empathy levels (below 44). Horizontal lines in Figure 2 show the ranges of mild depression 41-44, below the lines score less than 40 represents the high risk of clinical depression.
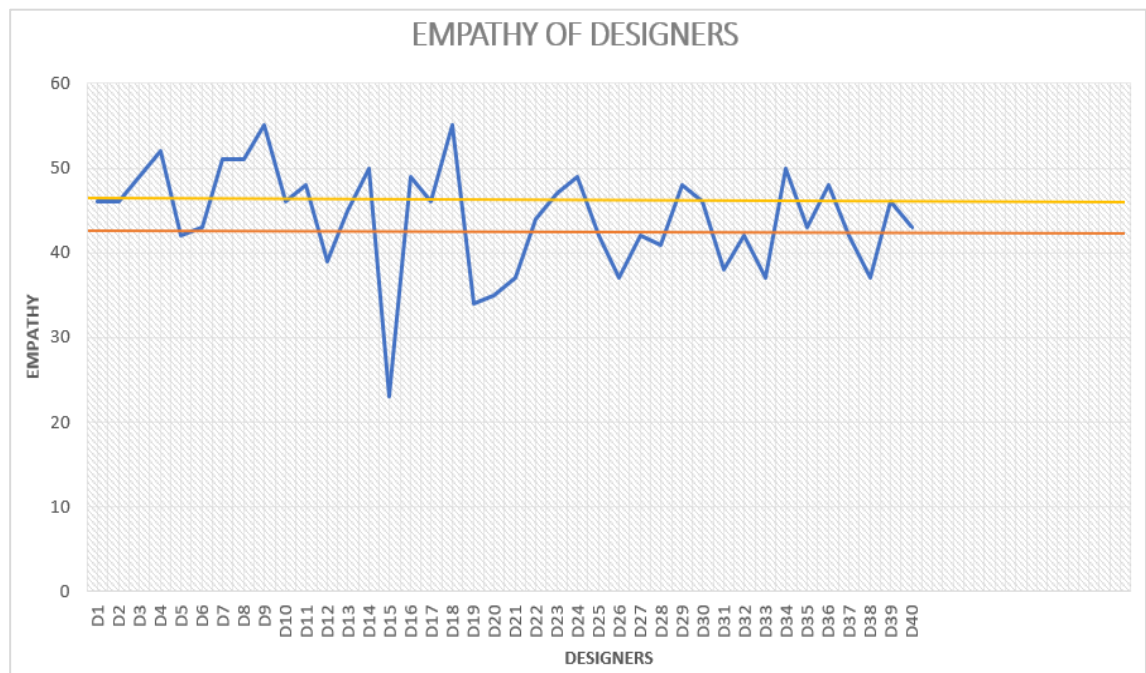

Figure 1: Scores on empathy scale of designers.

From Figure 1, it can be noted that the lowest level of average value on the empathy scale is 17 (42.5%) and greater than the highest level of average value is 13 (42.5%). The lowest level of empathy of less than 35 is 2 (5%) and the highest level of empathy greater than 50 is 5 (12.5%).

From Figure 2, it can be noted that 7 (17.5%) of the designers are under mild depression and 4 (10 %) of the designers are under high risk of clinical depression.

Table 1: *Scores on Empathy and Psychological well-being of Designers.*

Code	Gender	Age	Education	Score on Empathy	Score on Psychological well-being
D1	M	47	PG	46	57
D2	M	46	PG	46	54
D3	M	46	UG	49	62
D4	F	53	PG	52	46
D5	M	61	PG	42	53
D6	M	23	UG	43	43
D7	M	43	PHD	51	63
D8	F	29	UG	51	52
D9	F	25	UG	55	58
D10	F	35	UG	46	54
D11	F	22	UG	48	30
D12	F	22	UG	39	55
D13	M	22	UG	45	43
D14	M	29	PG	50	59
D15	M	25	UG	23	34
D16	M	34	PG	49	57
D17	M	39	PG	46	56
D18	F	33	PG	55	34
D19	M	35	PG	34	42
D20	M	28	PG	35	48
D21	F	24	PG	37	41
D22	M	27	UG	44	50
D23	F	30	PG	47	48
D24	M	58	PG	49	52
D25	F	25	PG	42	50
D26	M	24	PG	37	26
D27	M	40	PG	42	56
D28	M	25	PG	41	44
D29	F	25	PG	48	43
D30	F	25	UG	46	56
D31	M	36	PG	38	49
D32	F	25	PG	42	50
D33	M	47	PG	37	61
D34	M	29	PG	50	48
D35	F	26	PHD	43	47
D36	M	46	UG	48	56
D37	F	35	PG	42	47
D38	F	32	PG	37	44
D39	M	35	PG	46	56
D40	M	42	PG	43	52

Anxiety can be brought on by the practice of design. As practitioners, designers were frequently required to go deep into issues and analyse every aspect of users' difficulties. If designers are not attentive, they risk internalising these difficulties through their empathy. In the spirit of creating practical solutions, designers naturally share these burdens. Designers undergo stress and anxiety because of several reasons like deadlines, anxiety about acceptance or rejection of their designs and promotional issues. When this anxiety is not appropriately handled or treated, it can result in depression.
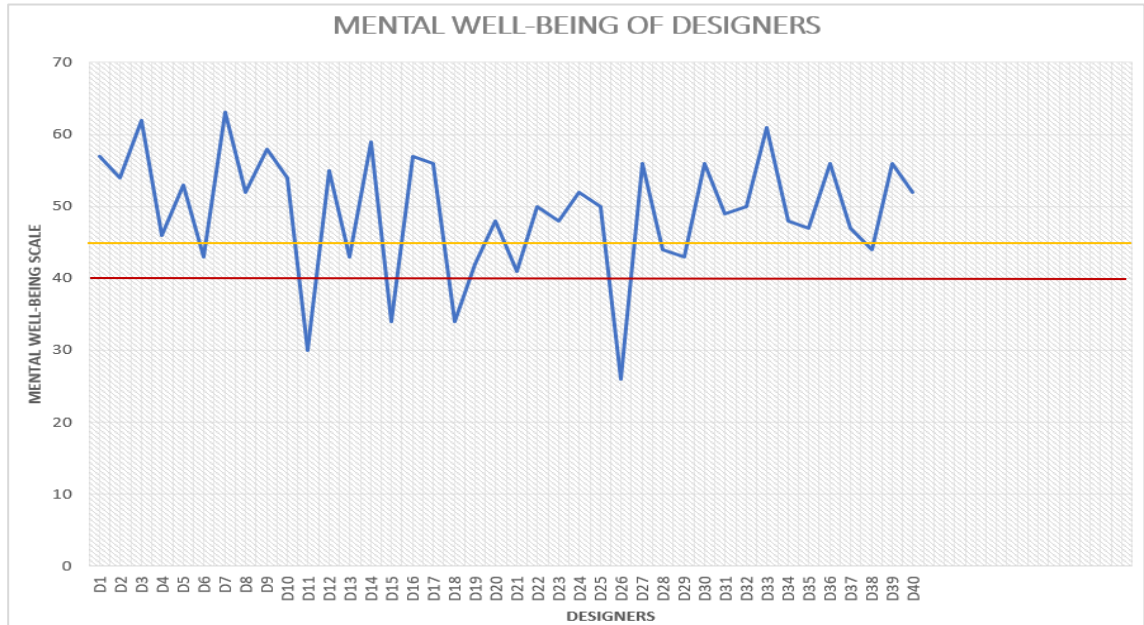
Figure 2: Scores on psychological well-being scale of designers.

Hypothesis: 1

There is a significant correlation between empathy and psychological well-being across the designers.

To verify the hypothesis all three correlational coefficients, Pearson correlation, Spearman correlation, and Kendall's tau are obtained by SPSS and are tabulated in Tables 2, 3, and 4.

Table 2: *Pearson Correlation coefficients between empathy and psychological well-being across the professionals (* Correlation is significant at 0.05 level (2-tailed)).*

		Empathy	Psychological Well-being
Empathy	Pearson Correlation	1	0.349*
	Sig. (2-tailed)		0.027
	N	40	40
Psychological Well-being	Pearson Correlation	0.349*	1
	Sig. (2-tailed)	0.027	
	N	40	40

Table 3: *Spearman Correlation coefficients between empathy and psychological well-being across the professionals (* Correlation is significant at 0.05 level (2-tailed)).*

		Empathy	Psychological Well-being
Empathy	Spearmman Correlation	1	0.352*
	Sig. (2-tailed)		0.026
	N	40	40
Psychological Well-being	Spearmman Correlation	0.352*	1
	Sig. (2-tailed)	0.026	
	N	120	120

Table 4: *Kendall's tau between empathy and psychological well-being across the professionals (* Correlation is significant at 0.05 level (2-tailed)).*

		Empathy	Psychological Well-being
Empathy	Kendall's tau	1	0.283*
	Sig. (2-tailed)		0.013
	N	40	40
Psychological Well-being	Spearmman Correlation	0.283*	1
	Sig. (2-tailed)	0.013	
	N	40	40

From Tables 2, 3, and 4, it can be noted that all three correlational coefficients show a significant positive correlation between empathy and psychological well-being. A positive correlation between empathy and psychological well-being indicates that the higher the empathy and better the psychological health. This may be because of the satisfaction obtained by the right understanding of the people in society. A similar positive correlation between empathy and psychological well-being was reported in the literature for professional nurses (Bourgault et al., 2015) where they found significantly higher average empathy scores in the groups with higher well-being and medical residents (Shanafelt et al., 2005) in which it was found that the medical residents who had high levels of well-being paid more attention to their patient's experience and showed more empathy. Available literature also suggests that empathy declines with psychological distress ((Bourgault et al., 2015). The present study also observes a similar association with these variables in the case of designers D15 (23, 34) and D26 (37, 26). Unstructured interviews with D15 and D26 revealed that designers undergo stress and anxiety because of several reasons like deadlines, anxiety about acceptance or rejection of their designs and promotional issues. Quite opposite conditions of high empathy and low psychological well-being D18 (55, 34) and low empathy and high psychological well-being D33 (37, 61) were also observed. This means people who do not care much about other people have good mental health on the other hand people who care too much about other people have poor mental health. But this was observed in few cases, one or two. Hence this can't be generalized. However, it is difficult from this study to identify the tradeoff between empathy values for good mental health (psychological well-being). Future research can focus on this perspective.

Hypothesis: 2

There is a significant correlation between empathy and age of the designers.

To verify the hypothesis, all the three correlational coefficients, Pearson correlation, Spearman correlation and Kendall's tau obtained by SPSS are tabulated in the Tables 5, 6, and 7.

Table 5: *Pearson Correlation coefficients between empathy and age of the designers.*

		Empathy	Age
Empathy	Pearson Correlation	1	0.207
	Sig. (2-tailed)		0.201
	N	40	40
Psychological Well-being	Pearson Correlation	0.207	1
	Sig. (2-tailed)	0.201	
	N	40	40

Table 6: *Spearman Correlation coefficients between empathy and age of the designers.*

		Empathy	Age
Empathy	Spearmman Correlation	1	0.221
	Sig. (2-tailed)		0.170
	N	40	40
Psychological Well-being	Spearmman Correlation	0.221	1
	Sig. (2-tailed)	0.170	
	N	40	40

Table 7: *Kendall's tau between empathy and age of the designers.*

		Empathy	Age
Empathy	Kendall's tau	1	0.150
	Sig. (2-tailed)		0.192
	N	40	40
Psychological Well-being	Spearmman Correlation	0.150	1
	Sig. (2-tailed)	0.192	
	N	40	40

From Tables 5, 6, and 7, it can be noted that all three correlational coefficients do not show any significant positive correlation between empathy and the age of the designers. Instead of the age of the designer, the experience of the designers in the same design field may have any relation with empathy may be researched in the future.

Conclusion

In the light of the objectives set forth for the current investigation, the data was collected with the help of a suitable tool. This data was analyzed using SPSS tool and on the basis of the discussions of the results, certain factors have been revealed. These broader conclusions are presented below:

- All three correlational coefficients, Spearman correlation coefficient, Pearson correlation coefficient, and Kendal's Tau show a significant positive correlation between empathy and the psychological well-being of the designers.
- The positive correlation between empathy and the psychological well-being of designers indicates that the higher the empathy and better the psychological health.
- All three correlational coefficients, Spearman correlation coefficient, Pearson correlation coefficient and Kendal's Tau shows do not show any significant positive correlation between empathy and the psychological well-being of the designers.

Limitations of the Present Study

The present study has strengths and limitations. First, it addressed the sensitive issue of empathy and mental health of the designers. All the measuring instruments or tools used for these concepts were valid and suited to the population studied. However, there are some following limitations of the present study, they are:

- Because empathy is a behavioral aspect, evaluating empathy with a self-administrated questionnaire may not give a complete portrait. It would be better if we can use multiple assessment strategies or methods like the combination of qualitative and quantitative measures.
- Another limitation of the present study is smaller the sample size. However, a larger and randomly selected national sample could have been more representative and may increase the generalizability.
- Another limitation of this study is self-reported empathetic responses are confounded by social desirability. Being empathetic and showing empathetic behavior in response to others' needs and conditions are socially desirable.

Implications, Suggestions and Future Scope

Quite opposite conditions of high empathy and low psychological well-being and low empathy and high psychological well-being were also observed in this study. This means people who do not care much about other people have good mental health, on the other hand people who care too much about other people have poor mental health. But this was observed in few cases, one or two. Hence this can't be generalized. However, it is difficult from this study to identify the tradeoff between empathy values for good mental health (psychological well-being). Future research can focus on this perspective.

Whether or not their psychological distress causes declining empathy levels and thus leads to these types of incidents needs to be researched. Psychological distress causing low empathy or low empathy resulting the psychological distress, which is the cause and which is the effect needs to be explored.

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