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How Much Does Empathy Resemble Trust? Trust Radius and Interpersonal Empathy in South Korea

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Abstract

This research attempts to 1) explore trust from a theoretical angle using various perspectives in the social science research literature and 2) reveal the empirical relationship between trust and empathy at the individual level. Although trust and empathy share similar characteristics when considered in the realm of theory, they have typically been probed in distinct disciplines. Hence, there is a need for an interdisciplinary perspective that addresses two concepts together. Using the Social Attitude Survey for Korean Society data collected in 2021, this study conducted a correlation and multivariate analysis that examined how much trust and empathy resemble. The results show that trust radius and interpersonal empathy are highly correlated. Also, trust and empathy levels differ from individual to individual in terms of one's socioeconomic and demographic background. From this comparison, we emphasize the importance of the macro level effect of trust and empathy.

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Introduction

This study aims to probe the relationship between trust and empathy, both theoretically and empirically. Even though trust and empathy are key components that build social interactions and create cooperation, they have been researched separately in distinct disciplines. Studies in sociology have mainly investigated trust in the realm of social capital (Coleman, 1988; Paxton, 1999; Putnam, 2000) but have considered empathy as a psychological trait existing for a long period of time (Ruiz-Junco, 2017). On the other hand, explorations of empathy have largely been regulated to psychological studies, and psychologists have tried to understand trust from their own perspective.

Due to these research trends, research which has addressed these two concepts in a single study has had only limited findings. For instance, Feng et al. (2004) examined the role of empathy on online interpersonal trust, but they only studied the trust for communication partners in an

online environment. Although their study has contributed to revealing the relationship between trust and empathy, it is limited because it only studied computer-mediated communication and did not test the level of trust and empathy on a generalized level. Other research such as Northouse (1979) and Koehn (2012) have also considered the two concepts together, but these studies were mainly for the nurse-nurse relationship in hospitals and were scrutinized from feminist perspectives.

Likewise, it is difficult to find research about trust and empathy in general, yet pundits have admitted the importance of them in interpersonal relations, social cohesion, and cooperation in society (Fukuyama, 1995; Evans and Krueger, 2009; Davis, 2015). In line with this discussion, recently many researchers have emphasized the necessity of an integrated perspective between trust and empathy (Jang, 2019). For example, Segal (2007) started to develop and use the term social empathy to underpin the social characteristics of empathy.

In light of this growing demand, this study 1) theoretically compares trust and empathy from an interdisciplinary perspective, and 2) empirically examines the relationship between trust and empathy. It focuses on the concept of trust radius (or radius of trust) and interpersonal empathy, which are the most appropriate concepts for capturing the relationship between trust and empathy from a broad perspective. The reason for the focus on trust radius and interpersonal empathy is because both concepts are important for understanding cooperation and social virtues between people. Trust radius is a concept developed by Fukuyama (1999). It refers to the potential range of cooperation in society (Delhey et al., 2011; van Hoorn, 2014). Its measurement has been developed in various ways (e.g., Delhey et al., 2011; Hu, 2017; Lim et al., 2021), and we use the version of Lim et al. (2021) in this study. Interpersonal empathy means the processes by which individual try to understand one another's emotions and situations, and respond to them (Batson, 2011; Segal, 2013). We use the Interpersonal and Social Empathy Index (ISEI) of Segal et al. (2013) to empirically capture interpersonal empathy.

To compare trust and empathy on a sound basis, this research involves the following steps: First, it introduces various definitions of the two concepts and reviews the interdisciplinary literature, especially focusing on Sociology and Psychology. The reason why we focus on Sociology and Psychology is that there are ongoing debates as to whether trust and empathy are general dispositions or social constructs (Yamagishi and Yamagishi, 1994; Paxton and Glanville, 2015) in these fields. Without discussion of them, empirical examinations of the two concepts are meaningless. After that, we explore the correlation between the two concepts and how they are affected by the socioeconomic statuses of individuals in South Korea by conducting a multivariate analysis. South Korea is an apt location for studying the relationship between trust and empathy in that trust level and radius are rather in-group focused compared to other countries due to the influence of Confucianism (Delhey et al., 2011). Considering that empathy is also more likely to be motivated by interactions with in-group people (Gutsell & Inzlicht, 2010; Firat & Hitlin, 2012), we can rigorously compare trust and empathy by controlling the in-group focused tendency of both concepts when we research the South Korean case. With these steps, we emphasize the importance of trust and empathy in social science research.

Theoretical Background

Trust is one of the most fundamental resources not only for maintaining social interactions and networks, but also for promoting cooperation among members in society (Sztompka, 1999; Putnam, 2000; Cook, 2001). In this sense, trust has been one of the core elements of Sociology. Simmel and Luhmann are the leading theorists of (social) trust. Simmel emphasized the importance of trust by saying that “Without the general trust that people have in each other, society itself would disintegrate” (Simmel, 1978 [1907]: 178, in Im, 2018), Luhmann argued that trust is prerequisite for social stability (Lewis and Weigert, 1985: p. 968).

Previous studies on empathy also underpin its beneficial effects. Empathy is generally thought as the ability to understand the feelings of others and is an essential ability to promote social consensus and maintain personal relationships (de Waal, 2008). Numerous studies have linked high empathy to social virtues such as altruism (Batson et al., 2015) and prosocial behavior (Davis, 2015).

It is evident that trust and empathy are catalysts for maintaining social relations and promoting social cohesion in a society, but both concepts are discussed separately in academia. Although this is because trust itself has unique characteristics which are distinguishable from empathy (and vice versa), they are very closely associated in that trust and empathy 1) inherently have relational characteristics, 2) are usually created or motivated regardless of self-interest or instrumental rationality, and 3) are combinations of psychological dispositions and social forces. To provide the theoretical justification of this study on trust and empathy, we review these three similarities in this chapter.

Relational Characteristics of Trust and Empathy

Without social relations, there is no trust nor empathy. Likewise, it is not an exaggeration to say that relationships are a fundamental resource for establishing trust and empathy. Ruiz-Junco (2017), who has attempted to advance the sociological study of empathy, indicates that one of the main reasons why those in the field of Sociology should explore the concept of empathy is that empathy stems from social relationships. From a micro level perspective, his argument rings true because the origin of trust and empathy is social relationships. However, trust research in Sociology is not only for interpersonal relations, but has been expanded to the collective, institutional, and social levels (Kim, 2018). With this in mind, our next focus moves on to how studies of empathy have understood the extension of empathy to the development of a macro-perspective.

Segal’s research of social empathy clearly shows how much empathy is a social concept that is derived from relationships. According to her studies, contextual understanding and macro-perspective taking are the key components of empathy. Contextual understanding refers to “perceiving or experiencing other’s life situations,” and macro-perspective taking means the ability to understand the situation of people who have different social or economic backgrounds (Segal, 2011). In this respect, we can see trust and empathy have similarities because the activation, promotion, and extension of both concepts are contingent on social relations.

Are Trust and Empathy Results of Rational Choice?

Rational choice theory is a grounded theory of studies of trust in Sociology (Cook and Santana, 2018). The early trust researchers understood trust as an outcome of interactions between a truster and trustee. In this sense, Luhmann (1979) suggested that believing information provided by unknown trustees is tantamount to gambling. Coleman (1990) also asserted that individuals have no reason to trust others when potential gains are not expected from trusting others. However, as shown in the prisoner's dilemma game in which individuals make irrational decisions due to a change in how they anticipate trust under certain conditions, we can say that trust is not firmly based on rationality but instead is affected by social conditions (Wilson, 2018).

Furthermore, there are several criticisms of rational choice theory, and trust research offers very persuasive reasoning that trust is not a result of rational choice. Wittek et al. (2013) argue that most research that claims trust understanding is an outcome of rationality suffers from "methodological individualism." Wittek and his colleagues (2013) insist that there are only a few conditions in which the relationships between individuals are purely based on rationality (such as perfect markets), and thus their assumptions are hyperrational. Hence, trust research should not be strictly based strictly on rational choice theory.

In empathy studies, claims that empathy is not something derived from rational choice are also dominant (Batson and Ahmad, 2009). Many studies of empathy in the academic literature focus on empathy-altruism relationships, suggesting that empathy's emotional and affective characteristics work when people observe someone in need. Although cognitive aspects of empathy may be activated in a rational manner, this does not guarantee that the cognition of individuals always works in a way that is strictly based on rational choice and self-interest. As seen in this review, trust and empathy have another similarity, and more investigation of the resemblance of the two concepts is definitely needed.

The Impact of Social and Psychological Forces on Trust and Empathy

Even though trust has been mainly studied in Sociology and empathy has been largely investigated in Psychology, neither field claims that they are pure sociological or psychological concepts respectively. Ironically, trust had been considered a psychological trait until the 1980s when sociologists started to explore its collective and social characteristics (Lewis and Weigert, 1985). Psychological studies on trust have also acknowledged that trust is a situational concept, which implies that trust has social characteristics (Evans and Krueger, 2009).

How about empathy? Ruiz-Junco (2017) suggests that empathy can be considered a social concept because it is realized through an individual's process of imagination. His argument is based on Cooley's idea of sympathetic knowledge. Cooley (1926) noted in his article *The Roots of Social Knowledge*:

[Empathy] ... developed from contact with the minds of other men, through communication, which sets going a process of thought and sentiment similar to theirs and enables us to understand them by sharing their states of mind. This I call personal or social

knowledge. It might also be described as sympathetic, or, in its more active forms, as dramatic, since it is apt to consist of a visualization of behavior accompanied by the imagination of corresponding mental processes (Cooley, 1926, p. 60).

Psychologists also admit that empathy is a social construct as well as a psychological trait (Gerdes, Segal, & Lietz, 2010) because empathy is not activated in a way that is absent of its context and embeddedness (Gibbons, 2011). If we follow this discussion that trust and empathy both share social and psychological dispositions, we may infer that trust and empathy are correlated with their resemblance of relational characteristics as well as their shared cognitive-affirmative aspects. With the two hypotheses below, we empirically examine how much trust and empathy are correlated and affected according to each individual's background. For an inquiry into the overlap between the two, we conduct a correlation and multivariate analysis, the model of which has more than one outcome variable.

Hypothesis 1. Trust radius and interpersonal empathy are highly correlated.

Hypothesis 2. Trust radius and interpersonal empathy are affected by an individual's socioeconomic and demographic characteristics.

Data and Methods

This study examined the relationship between trust radius and interpersonal empathy in South Korea using the 2021 Social Attitude Survey for Korean Society data collected by the Center for Global Culture and Social Empathy, which is affiliated with the University of Seoul. It also investigated the influence of socioeconomic status on trust radius and interpersonal empathy. The survey was conducted online and was limited to respondents who were in the age range of 15 to 69. It also used stratified sampling, considering demographic proportions with respect to age, sex, and region. The final sample size was 1,219, and listwise deletion was used to deal with missing values.

Table 1 Ten Items for Measuring Interpersonal Empathy

Variable	Questions
ie01	I can consider my point of view and another person's point of view at the same time.
ie02	I am good at understanding other people's emotions.
ie03	When I see a person experiencing a strong emotion, I can accurately assess what that person is feeling.
ie04	I can tell the difference between someone else's feelings and my own.
ie05	I am aware of what other people think of me.
ie06	I am aware of other people's emotions.
ie07	I can explain to others how I am feeling.
ie08	When I see someone receive a gift that makes them happy, I feel happy myself.
ie09	When I am with someone who gets sad news, I feel sad for a moment too.
ie10	Hearing laughter makes me smile.

Source: Segal et al. (2013)

The key dependent variables were trust radius and interpersonal empathy. The dataset has ten items for gauging interpersonal empathy based on the Interpersonal and Social Empathy Index (ISEI) of Segal and her colleagues (2013) (see Table 1). The range of each question was 0 to 4, and higher values for all the variables indicated that individuals were more empathetic to other people. The Cronbach Alpha of ten items was 0.84, which means that they had internal consistency. We created an interpersonal empathy variable by adding up a set of items. The ten variables for interpersonal empathy included three important elements of interpersonal empathy. Variables ie01 to ie04 represented *Self-other awareness*, *Cognitive aspects of empathy* were measured in ie05 to ie07, and ie08 to ie10 revealed the *Affective response* of the individuals surveyed.

Trust Radius was measured by using the method developed by Lim and his colleagues (2021). The approach of Delhey and his colleagues (2011) was the first attempt to empirically measure trust radius. They calculated each country's trust radius score by subtracting the coefficient of out-group trust by the coefficient of in-group trust. However, their analysis is mainly used for cross-national comparisons, so it is difficult to apply it to the individual level. To overcome this issue, several studies including Hu (2017) and Lim et al. (2021) used multilevel regression approaches. Both models systemically designed the measurements with the slope created by the level of trust of each group, but the version of Lim et al. (2021) revised Hu (2017)'s approach as detailed below.

To measure the radius of trust at the individual level, both models calculated the radius of trust with a slope from the trust level of several social groups (e.g., family, relative, and stranger). If one had higher a trust level for in-groups and a lower trust level for out-groups, they would have a steep slope and would be given a low trust radius score. On the other hand, if another individual had a higher trust level for both in-groups and out-groups, their trust radius gradient would be rather flat, and we considered such a finding as having a higher trust radius score.

The issue that Hu brings up (2017) is that people have the same trust radius score if they show the same trust level for all groups. For example, if one person gives the highest scores (4: trust completely) to all groups, and the other gives the lowest scores (1: do not trust at all) to all groups, both of their trust radius slopes are flat, and they have the same trust radius. To deal with this issue, Lim and his colleagues (2021) assigned virtual highest trust level scores on ego (5) and calculated the gradient. In this study, we follow the approach of Lim et al. (2021).

Because we also conduct a multivariate analysis to look at how socioeconomic status and demographic characteristics of individuals affect trust radius and interpersonal empathy, we included age, sex, education level, household income, and political ideology in our model. Sex has two categories which are male and female, and we included age group as well in our analysis. Also, we have four education groups: graduated middle school or less, graduated high school, attended or graduated vocational college, and attended or graduated college. The reference group for each was female, 20s, and R<= middle school. Political ideology was divided into four categories: very liberal, liberal, moderate, conservative, and very conservative. We set very liberal

as the reference group of the political ideology variable in every regression model. Table 2 below shows the descriptive statistics of the total sample.

Table 2 Descriptive Statistics

Variable	Category	Freq	Percent	Variable	Mean	SD	min	max
Sex	Male	617	50.6%	TR	-0.486	0.133	-0.8	-0.014
	Female	602	49.4%	IE	26.07	5.22	4	39
Age	10s	146	11.9%	ie01	2.56	0.74	0	4
	20s	200	16.4%	ie02	2.58	0.78	0	4
	30s	201	16.5%	ie03	2.45	0.78	0	4
	40s	233	19.1%	ie04	2.59	0.75	0	4
	50s	232	19.0%	ie05	2.36	0.78	0	4
	60s	207	17.0%	ie06	2.54	0.8	0	4
Education	≤middle school	59	1.4%	ie07	2.56	0.83	0	4
	high school	329	22.8%	ie08	2.87	0.82	0	4
	vocational college	155	14.2%	ie09	2.83	0.79	0	4
	college diploma	676	61.6%	ie10	2.73	0.84	0	4
Political ideology	very liberal	43	3.5%					
	liberal	278	22.8%					
	moderate	609	50.0%					
	conservative	263	21.6%					
	very conservative	26	2.1%					
Total		1219	100.0%					

Results

To test our hypotheses, we first investigated the correlation between trust radius and interpersonal empathy including each question pertaining to interpersonal empathy. As expected in hypothesis 1, trust radius and interpersonal empathy were correlated at a statistically significant level ($p < .001$). Surprisingly, trust radius was highly correlated with all ten items of the interpersonal empathy scale ($p < .001$ in all relationships). From this finding, we can see that trust radius resembled all of the interpersonal empathy components of Self-other awareness, Cognitive aspects of empathy, and Affective response.

Because we did not assess the direction and causation between trust radius and interpersonal empathy, both variables had to be assigned as dependent variables in our model. However, it is evident that trust radius and interpersonal empathy are highly correlated as noted in the findings above, so we needed to control this relationship. One advantage of a multivariate analysis is that we can run a regression model that considers the covariance between the two outcome variables. By using this strategy in our study, we could accurately estimate the influence

of socioeconomic characteristics and demographic characteristics on trust radius and interpersonal empathy.

Table 3 Correlation between Trust Radius and Interpersonal Empathy

	TR	IE	ie01	ie02	ie03	ie04	ie05	ie06	ie07	ie08	ie09	ie10
TR	1.00											
IE	0.19***	1.00										
ie01	0.10***	0.63***	1.00									
ie02	0.15***	0.68***	0.39***	1.00								
ie03	0.12***	0.67***	0.38***	0.41***	1.00							
ie04	0.12***	0.72***	0.44***	0.46***	0.45***	1.00						
ie05	0.14***	0.60***	0.27***	0.32***	0.42***	0.40***	1.00					
ie06	0.11***	0.72***	0.39***	0.53***	0.49***	0.48***	0.43***	1.00				
ie07	0.11***	0.64***	0.40***	0.39***	0.38***	0.45***	0.35***	0.35***	1.00			
ie08	0.11***	0.67***	0.35***	0.35***	0.36***	0.40***	0.22***	0.36***	0.33***	1.00		
ie09	0.11***	0.62***	0.32***	0.31***	0.26***	0.33***	0.22***	0.32***	0.26***	0.54***	1.00	
ie10	0.18***	0.64***	0.26***	0.31***	0.29***	0.36***	0.29***	0.33***	0.32***	0.49***	0.50***	1.00

Table 4 Multivariate Analysis Result

	Model (1)	Model (2)
	TR	IE
Gender (ref=female)		
male	0.029*** (0.007)	-1.204*** (0.292)
Education (ref= R<=middle school)		
High school	-0.000 (0.019)	1.899*** (0.762)
Vocational college	0.000 (0.022)	1.080 (0.872)
College diploma	0.002 (0.020)	2.393** (0.796)
Age group (ref = 10s)		
20s	-0.000 (0.159)	-2.332*** (0.631)
30s	0.028+ (0.016)	-2.867*** (0.635)
40s	0.039** (0.016)	-2.765*** (0.626)
50s	0.070*** (0.015)	-2.087*** (0.609)
60s	0.088*** (0.151)	-0.882 (0.599)
Political Orientation (ref=extremely liberal)		
liberal	0.007 (0.021)	-1.073 (0.834)
moderate	0.013	-3.096***

	(0.020)	(0.806)
conservative	0.022	-2.228***
	(0.021)	(0.835)
very conservative	0.012	-1.224
	(0.031)	(1.261)
Subjective class (<i>ref</i> = lower class (1))		
2	0.024 (0.030)	-0.803 (1.176)
3	0.016 (0.026)	-0.362 (1.038)
4	0.049 (0.026)	0.555 (1.029)
5	0.054* (0.026)	0.138 (1.014)
6	0.074** (0.254)	0.060 (1.009)
7	0.082** (0.027)	0.248 (1.056)
8	0.122*** (0.030)	1.358 (1.190)
9	0.080 (0.049)	3.221+ (1.934)
10	0.019 (0.068)	-4.184 (2.704)
Constant	-0.612*** (0.036)	0.711*** (0.019)
<i>N</i>	1219	1219
adj. <i>R</i> ²	0.112	0.096
F	6.831	5.771

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results in table 4 indicate that trust radius score and interpersonal empathy vary according to an individual's social and economic background. Although self-reported class background did not affect interpersonal empathy levels, people from middle- and high-class backgrounds had wider trust radii than those from lower class backgrounds. The most intriguing finding was that trust radius and interpersonal empathy contrasted by age group. People over 40 had narrow trust radii, but their interpersonal empathy scores were higher than young people. From this finding, we can see that trust radius and interpersonal empathy are correlated but are contingent upon everyone's individual situation, which means that both concepts are *situational*.

Conclusion

In this study, we investigated how much trust and empathy are similar, both theoretically and empirically. Trust and empathy have similarities in three respects: 1) both originate from social relations, 2) both are not a result of rational choice, 3) both include social characteristics as well

as psychological traits. With these features in mind, we empirically assessed how much trust and empathy were correlated and affected by an individual's socioeconomic status. The results show that trust radius and interpersonal empathy are highly correlated and also confirm that they are influenced by the socioeconomic backgrounds of each individual. The findings suggest the importance of future research that investigates the similarities and differences between trust and empathy.

However, this study is not without its limitations. First, the framework we suggested for trust and empathy is still very preliminary. A more concrete theoretical review is needed to integrate trust and empathy into a single body of research, and more interdisciplinary efforts are also needed. Furthermore, we could not analyze the multidimensional aspects of trust and empathy. Trust radius is based on interpersonal trust, and it is hard to capture system trust or institutional trust which is one of the pillars of social trust analyzed in the discipline of Sociology (Luhmann, 1979). Nevertheless, we hope this research serves as a cornerstone for future trust and empathy studies from interdisciplinary perspectives.

Notes

Sumin Lee is a doctoral student in the Department of Sociology at the University of Texas at Austin. His research interests are civil society, nonprofit organizations, and social media. For these studies, Sumin has worked at the intersection of political sociology, network analysis, and social psychology. Sumin received his B.A. in Sociology and Economics and M.A. in Sociology from the University of Seoul, South Korea.

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