The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient interaction*

Kun Yang

Nanjing Normal University
China

Kun Yang: Nanjing Normal University, China. | E-mail: nortonyang@163.com

63
March
2024

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

162

Abstract

Trust-related issues have attracted much attention from researchers recently. In the studies on trust, little attention has been paid to its interrelations with cooperativity and reliability. This paper sheds light on the relationship among trust, cooperation, and reliability in a medical context. Through a discourse analysis of the conversations between doctors and patients (including the patients' relatives) in China, this paper finds that: (i) cooperativity will not directly lead to trust in a medical context; (ii) being cooperative or using strategies to disclaim responsibility will lead to high reliability and will indirectly construct trust; (iii) reliability is a premise for trust in the medical context, and it can be repaired through rapport management strategies, such as empathy discourse if that reliability has been broken down. The research findings in this paper possess both theoretical and practical significance because they will refresh our understanding of the interrelationship among trust, cooperation, and reliability and contribute to the maintenance or enhancement of trust relations between doctors and patients.

Keywords: trust; cooperativity; reliability; medical context; discourse.

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

163

1. Introduction

The notion of trust has garnered growing interest in recent research across psychology, communications, sociology, economics, and political science (Falcone et al., 2001). Over the past decades, trust has been characterized as a personality trait (Deng et al., 2017; Rotter, 1971), a belief (Jones and Sin, 2013; Lindskold, 1978), a social structure (Shapiro, 1987), or a behavioural intention. While trust has been extensively investigated, it has yet to gain more attention regarding its relation to cooperativity and reliability. On the one hand, prior studies suggest a potential correlation between trust and cooperativity, yet these pivotal concepts have not been properly harmonized or finely tuned (Adoutte et al., 2000; Aikhenvald, 2004; Bloomquist, 2010). On the other hand, there is evidence indicating a plausible association between trust and reliability (McCready, 2015). Studying the relationship between trust, cooperativity, and reliability is imperative, as we can only offer recommendations for establishing interpersonal and institutional trust by understanding the interplay among these three factors (Candlin and Crichton, 2013). As such, this paper aims to identify the interrelationships among trust, cooperativity and reliability based on discourse analysis of doctor-patient conversations collected from a hospital in China.

2. Literature review

2.1. Trust, cooperativity and reliability

There is a wide variety of research on trust, but the majority of definitions follow Rousseau et al. (1998: 395): "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another". After reviewing the definitions of trust, we classified them into three types: (i) according to the characteristics of the trustee viewpoint, trust is believed to be related to the trustee's " ability, benevolence, integrity, and predictability" (Fuoli et al., 2017: 654); (ii) according to the conceptual type viewpoint, trust is studied through the "trustee's attitude, intention, belief, expectancy, behaviour and disposition" (Falcone et al., 2001); (iii) according to the elements in the trust viewpoint, trust is classified as either knowledge-based trust or identification-based trust (Pelsmaekers et al., 2014). Based on the previous definitions of trust, this paper defines it as the trustor's mental status of expecting the trustee to provide truthful information or enable mutual understanding in interpersonal communication.

Another key term in this paper is cooperativity, which is derived from McCready (2015). According to her, cooperativity is the credibility of the speaker, that is, the degree of trustworthiness of the speaker's utterances. Cooperativity works on the basis that the speaker will not do harm to others with whom he/she is in communication, and cooperativity works as an innate element in subsequent communication (or repeated games). This paper admits that the trustee's trustworthiness is an important component of cooperativity, while also

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient…

164

considering cooperative action from the trustor in communication, because cooperation between communicators is the foundation for successful communication. Therefore, this paper redefines cooperativity as a property of communication in the trustee's cooperative action of providing truthful or sufficient information in a clear and relevant manner.

The third term in this paper is reliability, which is defined as different requirements for avoiding the possibility of errors associated with different sources of putative knowledge (Audi, 2002). What is central to the definition is the objectivity of the information source, aiming to avoid the risk (Pym, 2015) of uncertainty in the interpersonal communication of modern society (Beck, 1992; Fuoli and Paradis, 2014). However, reliability is not only about the objectivity of information sources or knowledge but is also related to other factors, namely, experience and future expectations (McCready, 2015). If there is a conflict between one's experience with and future expectations of the speaker, then the speaker's reliability is lower. As Mayer et al. (1995: 713) mentioned, we trust someone because he/she will "behave in a way that coincides with our desires". To ensure consistency between a speaker's assertion and the listener's expectations, the speaker must adopt linguistic strategies to build a reliable or reputational identity. The most popular research on reliable identity construction strategies focuses on hedges (Hoang, 2017; Lehtinen, 2013). Additionally, there are other studies that are worth mentioning for constructing a reliable identity (Sowińska and Sokół, 2018). For example, Lorenzo-Dus and Izura (2017) explored online grooming, whereby an adult gains the trust of a minor to exploit him/her. They found that the reliability of the adult's words is improved by offering compliments to the minor. They also proved that the speaker's potential opportunistic behaviour would vary in social contexts (Pennings et al., 2018), and researchers can test the variation through discourse analysis. Therefore, reliability in interpersonal communication is highly context-dependent and varies from social group to social group (McCready, 2015). Many studies have shed efforts on the variation in different contexts, which implies that the definition of reliability should consider the effects of context (Cox and Orman, 2015). Based on these considerations, this paper tries to update the definition of reliability as the consistency of a trustee's assertion constructed through linguistic strategies like hedges to lower the risk of breaking down the trustor's expectations within different contexts.

2.2. Interrelationship among trust, cooperativity and reliability

When we are reviewing prior literature, we could find clues related to the interrelationship among trust, cooperativity, and reliability. The prior literature could be classified into two main strands: (i) the relation between trust and cooperativity, and (ii) the relation between trust and reliability.

Firstly, the relation between trust and cooperativity. According to previous studies, trust is tightly related to cooperativity in human communication (Hall et al., 2013). Specifically, trust

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

165

can be gained through the trustee's cooperativity. The assertion is based on the fact that we trust someone because the trustee will perform an action that is beneficial or at least not determined to us, and hence, we engage in some form of cooperation with the trustee (Gambetta, 1988). Accordingly, cooperativity is the foundation and typical feature of trust. For example, if one says, "I trust him", "I trust him to do X", or "I trust him in respect of … y", he/she implies that trusting the other would fulfil Gricean's maxims (Hardin, 2001). However, some literature recordings point to the fact that there may be an indirect connection between cooperativity and trust.

Let's consider the three situations: The first situation is that the previous study on trust and cooperativity still runs into a simple understanding of cooperativity, for it does not always mean that one adheres to the Gricean maxim even though the others trust him or her. Sometimes, the speaker would violate or opt out of the maxims of CP for some intention (Thomas, 1995). The second situation is that trust can only be gained if the trustee is cooperative. The third situation is that trust can be regained even though the trustee is not cooperative. Several studies have been conducted to prove these three situations; for example, Fuoli and Paradis (2014: 52-69) identify two fundamental strategies that a trust breaker may pursue to regain trust. On the one hand, the trust breaker may foreground his or her goodwill, sympathy, and positive qualities, which is a strategy that the authors note emphasizes the positive. Also, the trust breaker may seek to dialogically engage with and act upon the discourses that generate distrust. Both strategies may be used simultaneously and interact in a single instance of trust-repair discourse. It is obvious that trust between communicators is promised through cooperativity, and one has to repair trust when it has been broken down. Nevertheless, the linguistic strategies used to repair trust are still disputable. As some researchers believe that the strategies are used to maintain one's reputation or reliability (Fuoli and Paradis, 2014), a further study on the relationship between trust and reliability is still needed.

Secondly, there is a relationship between trust and reliability. Prior studies demonstrate that there have always been tight relations between reliability and trust. For example, McCready (2015) believed that the foundation for interpersonal communication is a belief in the general reliability of what the others say, i.e., considering the other party's complete reputation—the whole history of his/her utterances—. A positive evaluation of one's reliability leads to others' trust, as an important cognitive mechanism for trusting another person is based on a reputation or authority heuristic (Metzger and Flanagin, 2013). However, one's reliability (or reputation) cannot always be guaranteed. As such, some researchers believe that communicators use epistemic vigilance in interpersonal communication (Sperber et al., 2010). That is, high reliability leads to one's trust, while distrust happens if the other's reputation cannot be guaranteed or his/her reliability is inconsistent with the trustor's own epistemic vigilance.

To maintain reliability, one should not say something that one believes to be false. One needs to follow the quality maxim to guarantee the transparency of the information being provided (Grice, 1975, 1989; Fuoli and Paradis, 2014). However, when the trustor assumes that the conversational participants are not highly regarded, the trustee should take action to repair the reliability and regain the trustor's trust (McCready, 2015). One empirical study did prove that linguistic strategies can contribute to the repair of reliability. In Fuoli and Hart's (2018) study, they mentioned several strategies that could help repair trust, but the "trust repair" mentioned in their research is more akin to reliability repair, as they argued in 2014. Thus, this paper will use "reliability repair" instead of "trust repair" here. Besides, prior studies have emphasized the importance of openness and transparency in the process of reliability repair (Gillespie and Dietz, 2009; Pfarrer et al., 2010). For example, Fuoli et al. (2017) believed that one effective way to repair reliability is by accepting responsibility and apologizing for violating the quality maxim. Denial, on the other hand, can be used as a means of obfuscating the truth and may, therefore, inhibit this process. This view is supported by researchers in the neighbouring field of crisis communication, where, as noted by Coombs and Holladay (2008), the apology has generally been regarded as the best strategy for restoring a trustworthy image.

2.3. Summary

It can be summarized from the previous studies that there are tight relations between trust and cooperativity, as well as trust and reliability. As such, this paper assumes that there is an interrelationship among trust, cooperativity and reliability. However, no literature has documented the correlations among trust, cooperativity and reliability together until now. Testifying their correlation is of theoretical importance, as it will provide a new perspective on understanding the essence and construction of trust. It will also work as guidance for building interpersonal and institutional trust. What still needs to be done is to find discourse evidence to exemplify the interrelationship among trust, cooperativity and reliability.

3. Methodology

3.1. Research questions

This paper aims to testify to the possible interrelationship among trust, cooperativity and reliability. We assume that trust is tightly related to cooperativity and reliability in interpersonal communication (Hardin, 2001; McCready, 2015). Accordingly, we are going to answer the following three questions:

RQ1: What is the relationship between cooperativity and trust?

RQ2: What is the relationship between cooperativity and reliability?

RQ3: What is the relationship between reliability and trust?

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

167

3.2. Data collection and analysis

In order to answer these three questions, this article draws on conversations between doctors and patients from a hospital in China. We chose doctor-patient conversations as corpus because of an investigation entitled "Relationship between doctor and patient". When doing the investigation, we consistently heard the doctors say "we hope that the patient and their relatives can trust us so that we can offer them better medical treatment". The responses from patients and their families are as follows: "We have to trust the doctors; we have no choice". The investigation implies a considerable lack of trust between doctors and patients. One way to solve this problem is to improve the trust (as well as reliability and cooperativity) between doctors and patients in their interactions (Zheng et al., 2017). However, most solutions to improve trust focus on the interference of policy or management (Wilk and Platt, 2016), ignoring the effects of language manipulation in communication. Therefore, the purpose of this study on doctor-patient trust begins with an exploration of interpersonal trust through reliability and cooperativity and ends with the improvement of both interpersonal and institutional trust.

During the data collection process, we went to a hospital in North China and collected about 10 hours of conversations between doctors and patients (and their relatives). The conversations happened in the Department of Gynaecology and Obstetrics in this hospital. All six doctors and 12 patients (or relatives) are involved in the conversations. Before collecting any data, we will seek consent from both doctors and patients (and their relatives) and have them sign confidentiality agreements. The researcher transcribed the conversations between doctors and patients (or relatives) and built a corpus for analysis. Then, the researcher and another linguist analysed the corpus and selected the conversations that would be quantifiable for the analysis of trust, reliability and cooperativity using the data.

We employed the discourse analysis method to analyse the collected data. Discourse analysis is used because (i) this paper aims to determine the correlations among trust, cooperativity, and reliability that contribute to the construction of trust in doctor-patient interactions. An analysis of typical discourse features is the most appropriate way to achieve this purpose. (ii) One of the most important components of the layout of this paper is the search for evidence to support the new framework put forward here, that is, to test the correlation of trust, reliability and cooperativity. Discourse analysis is an effective way to offer the evidence that is needed. If the new framework is proven effective, it will lay a foundation for the future quantitative study of trust. Therefore, discourse analysis is the first step in the quantitative and qualitative analyses. (iii) Considering that this paper tries to study doctor-patient trust from a pragmatic perspective, discourse analysis is the most prominent research method currently in use.

The researchers analysed the collected data by following five steps: Step 1 is a discourse analysis on how we can decide whether one is trusted or not through the study on cooperativity. This step works as a criterion for selecting countable conversations but will not be

demonstrated in the paper. As this paper focuses on the possible interrelationship between trust, cooperativity and reliability, step 1 will not be illustrated in detail in this paper. Step 2 is a discourse analysis of the relation between cooperativity and trust. This step focuses on whether there is a direct connection between cooperativity and trust. Step 3 is a discourse analysis of the relation between cooperativity and reliability. This step mainly focuses on the construction of reliability when the trustee is non-cooperative. Step 4 is a discussion on the relationship between reliability and trust. Step 5 discusses the framework of the interrelationship among trust, cooperativity, and reliability, as well as the way to construct trust through linguistic strategies based on the previous four steps of analysis.

4. Research findings

Based on the conversations between doctors and patients (and their relatives), this section tries to answer the three questions from the three dimensions: the relation between cooperativity and trust (4.1), the relation between cooperativity and reliability (4.2), and the relation between reliability and trust (4.3).

4.1. Cooperativity and trust

Several studies have demonstrated that there is a close relationship between cooperativity and trust (Torpey and Johnson, 2013). However, a question remains unanswered: Will cooperativity always lead to trust? Even though researchers have found that cooperativity contributes to trustworthiness building (Candlin and Critchton, 2013), this paper finds that cooperativity will not always directly lead to trust. According to an analysis of the conversations between doctors and patients (and their relatives), the researchers found evidence that the doctors were not trusted even if the trustees were cooperative enough. The evidence is shown in example 1:

Example 1
[Context: the doctor suggested that the pregnant patient to go to the ICU for better treatment, but the pregnant patient misunderstood the doctor, thinking that the doctor would cut into her womb]

1. Doctor: 咱们得转到重症病房去。
        Zánmen dé zhuàn dào zhòngzhèng bìngfáng qù.
        We need to go to the ICU for treatment.

2. Patient: 我不去。
        Wǒ bù qù.
        No, I won't go there.

3. Relative: →去重症病房不是做手术。
        Qù zhòngzhèng bìngfáng bùshì zuò shǒushù.
        It's not an operation.

4.   那边儿设备好点儿。
          Nà biān er shèbèi hǎo diǎn er.
          The equipment in the ICU is better.

5.   →医生说不会把你孩子拿掉的。
          Yīshēng shuō bu huì bǎ nǐ háizi ná diào de.
          The doctor said they won't cut off your baby.

6. Patient: →我不想去。
          Wǒ bùxiǎng qù.
          No, I won't go there.

In example 1, the doctor suggests the patient go to the ICU, but the patient does not want to go there. Even though the doctor and the patient's relative provide truthful information about not cutting off the womb of the patient, the patient still does not trust them. Therefore, it can be inferred that cooperativity will not always lead to gaining the trust of others. However, when the trustee is cooperative, the trustor will finally trust him/her. There is a connection between cooperativity and trust, which is reliability. This paper found that cooperativity is a premise for reliability in interpersonal communication that indirectly leads to trust. The following sections will discuss how cooperativity would lead to direct reliability and indirect trust.

4.2. Cooperativity and reliability

It is a fact that one cannot always be cooperative in interpersonal communication. Pretending to be cooperative may lead to trust. However, one cannot maintain consistent trust for an extended period (the reliability breaks down), and trust is broken down when one is unreliable. So, the best way to maintain trust is to be cooperative. However, when the cooperativity of the trustee cannot be guaranteed, one needs to use linguistic strategies to mitigate the non-cooperativity (McCready, 2015). One linguistic strategy that has proven to be effective is hedging, which has the function of limiting the responsibility that the speaker must take for his/her linguistic actions (Vass, 2017). Different from a linguistic performance to be cooperative to trustors for the improvement of reliability, the primary purpose of hedging is to avoid responsibility. A typical example could be found in example 2:

Example 2
[Context: the young female patient refuses to take the tumor treatment, so three doctors, including the director, are convincing her parents to accept the treatment procedure on her behalf]

1. Doscotr:（你的）胎盘黏在上次手术的位置了。
          (Nǐ de) tāipán nián zài shàng cì shǒushù de wèizhìle.
          Your placenta is attached to the scar left by your last operation.

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

170

2.　　　　剖宫产的话风险很大。
　　　　Pōu gōng chǎn dehuà fēngxiǎn hěn dà.
　　　　The operation is very risky.

3.　　　　→*可能*咱们做手术的过程中人就没了。
　　　　Kěnéng zánmen zuò shǒushù de guòchéng zhōng rén jiù méiliǎo.
　　　　It is also possible that both the mother and the baby will not survive.

4.　　　　你们要不要再商量一下？
　　　　Nǐmen yào bùyào zài shāngliáng yīxià?
　　　　Do you family members need a discussion?

5.　　　　Relative: 不用商量了。
　　　　Bùyòng shāngliángle.
　　　　No, we need no more discussion.

6.　　　　→做吧。
　　　　Zuò ba.
　　　　Do it.

7.　　　　今天能做吗？
　　　　Jīntiān néng zuò ma?
　　　　Can we take the operation today?

In example 2, when the doctor communicates with the relative (the relative is the patient's husband) of the patient, he tries to demonstrate the risk of the operation being taken. By using the hedging phrase "it is also possible", the doctor is trying to limit his responsibility should the operation be unsuccessful. After hearing the doctor's words, the relative trusts the doctor. A signal of the relative's trust is that she asks the doctor whether the operation can be performed that day. In addition to hedges, there are other linguistic strategies that have the same functions of avoiding responsibility for the speaker's assertions, such as hesitating mitigators (Czerwionka, 2012) and hypothesizing mitigators. The hypothesizing mitigator concept is borrowed from Tseng and Zhang's (2018: 41) discussion of "if-then formulation". According to them, the speaker uses the if- clause to mitigate the possible negative effects of the linguistic action, whether it is a promise or prediction. In the collected data, we found evidence that the hypothesizing mitigators improve reliability when the speaker cannot maintain cooperativity. An example of a hypothesizing mitigator is shown in example 3.

Example 3
[Context: the patient is too young to have a tumor operation in order to lower the risk of another operation. The doctor is introducing a new technology for the operation and trying to convince the parents to accept the operation]

1. Doctor: →万一我们这次取出来的组织不合格的话可能就白忙活了。
Wàn yī wǒmen zhè cì qǔ chūlái de zǔzhī bù hégé dehuà kěnéng jiù bái mánghuole.
It is not worth it *if* the amount of the organ that is taken out is still not enough.

2. 不过，我们会尽最大努力。
Bùguò, wǒmen huì jǐn zuìdà nǔlì.
But, we will try our best.

3. Relative: 也就是说这次要取组织看看能不能做手术？
Yě jiùshì shuō zhè cì yào qǔ zǔzhī kàn kàn néng bùnéng zuò shǒushù?
So, the purpose is to determine what kind of lesion it is?

4. →我相信你。
Wǒ xiāngxìn nǐ.
I trust you.

In example 3, when the doctor introduces the operation plan to the relative of the patient, he uses the if-clause to mitigate the possible negative effects of his words. After the doctors employ such discourse strategies, we can observe a clear emergence of trust from the patient's relatives towards the doctors ("I trust you"). This example and example 2 demonstrate that one cannot always be cooperative in the medical context. However, one can maintain high reliability through linguistic strategies such as hedges or hypothesizing mitigators, even if cooperativity cannot be guaranteed. So, cooperativity in communication will indirectly lead to trust through reliability, especially when the cooperativity cannot be determined. A question remains unsolved: how to prove that reliability directly leads to trust. The following section will discuss this question.

4.3. Reliability and trust

This paper has proven a close relationship between reliability and trust. It echoes the prior research finding that speakers use some linguistic strategies to guarantee their reliability in communication, and "trust is predicated on the observations of properties indicating reliability" (McCready, 2015: 67). However, the study has not provided detailed information on how reliability can lead to trust. Based on the collected data, we found that a high reputation is the foundation for reliability, and it will win the trust of others. A typical example is shown as follows:

Example 4
[Context: the mother of the patient came to the doctor, hoping the doctor could perform an operation for her daughter]

1. Mother: 张主任，不好意思插个队。
Zhāng zhǔrèn, bù hǎoyìsi chā gè duì.
Director Zhang, excuse me?

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

172

2. 我老婆昨天住的院，现在说要做手术。
Wǒ lǎopó zuótiān zhù de yuàn, xiànzài shuō yào zuò shǒushù.
My daughter checked in the hospital yesterday, and the doctor said she needed to have an operation today.

3. →我们想让你来做手术。
Wǒmen xiǎng ràng nǐ lái zuò shǒushù.
We hope that the operation can be performed by you.

4. Doctor: 为什么做手术呀？
Wèishéme zuò shǒushù ya?
What is the reason for the operation?

5. Relative: 她是大龄产妇，医生说最好剖（腹产）。
Tā shì dàlíng chǎnfù, yīshēng shuō zuì hǎo pōu (fù chǎn).
She is a woman of advanced reproductive age, and the doctor said it is better for her to born by caesarean.

6. Doctor: 这样啊。
Zhèyàng a.
I see.

7. 找谁都一样。
Zhǎo shéi dōu yīyàng.
Any doctor in this hospital could perform the operation.

8. Relative: 不一样啊。
Bù yīyàng a.
You are different.

9. →找你我们才放心。
Zhǎo nǐ wǒmen cái fàngxīn.
We will set our mind if you do the operation.

As shown in example 4, the patient comes to the doctor because the doctor is a neurosurgeon with extreme precision and a strong track record. In other words, the patient's mother trusts the doctor because of his good reputation. It demonstrates that the reputation or reliability of a doctor ensures the patient's trust in him, which, in turn, demonstrates that the best way to maintain trust is to maintain good reliability.

Another question remains to be discussed: If the reliability has already been broken down, how can linguistic strategies be used to maintain trust by repairing reliability? It has been proven previously that hedges and hypothesizing mitigators are two linguistic strategies contributing to the mitigation of non-cooperativity that could break down reliability. We may still face a situation in which one is not trusted because of one's personal or group

reputation. Therefore, how can we regain trust when reliability has already been broken down? According to research by Fuoli (2016), linguistic strategies, such as denial and apology, contribute to the repair of trust. In addition, unlike previous studies, Fuoli and Hart (2018) proved that denial works better than an apology when the reliability has already broken down. However, when conducting research on the collected data, we could not find evidence to support the idea that denial works for repairing trust, as the doctors never denied that surgery had failed.

Additionally, the apology strategy for the purpose of trust repair was also never tested because none of the patients' relatives forgave the doctors. Rather, all of the patient's relatives chose to sue the doctors who had performed unsuccessful surgeries. The data prove that neither denial nor apology will repair trust when the reliability has broken down. However, the author still identified that empathy-related discourse has the function of trust-repair. A typical is as follows:

Example 5
[Context: The treatment for the patient had been repeatedly changed, and the relatives of the patient had lost their trust in the doctor. The doctor tried to regain the relatives' trust]

1. Relative: →他们原来说的是流产, 现在又要让我们生下来。
Tāmen yuánlái shuō de shì liúchǎn, xiànzài yòu yào ràng wǒmen shēng xiàlái.
What they said at first is abortion, but now is different from what they said. They want the baby to be born.

2. 我们怀疑前面吃的药会对孩子有影响, 特别着急。
Wǒmen huáiyí qiánmiàn chī di yào huì duì háizi yǒu yǐngxiǎng, tèbié zhāojí.
We suspect that the medicine they given us would do harm to the baby, so, we are more anxious.

3. Doctor: →我们把孕妇看成自己家人, 所以不会害她。
Wǒmen bǎ yùnfù kàn chéng zìjǐ jiārén, suǒyǐ bù huì hài tā.
The pregnant is like our family, so we will not do harm to her.

4. 孕妇的病情变得很快。
Yùnfù de bìngqíng biàn dé hěn kuài.
The disease of the pregnant changed rapidly.

5. 原来我们想孩子可能保不住。
Yuánlái wǒmen xiǎng hái zǐ kěnéng bǎobuzhù.
At first, we though the baby can not be born.

6. 现在看来还是能保住，所以想尽量给保住。
Xiànzài kàn lái háishì néng bǎozhù, suǒyǐ xiǎng jǐnliàng gěi bǎozhù.
But now, it seems that the baby can be born, so we try to keep the baby.

7. 你看你们家里人要不再商量商量。

Nǐ kàn nǐmen jiālǐ rén yào bù zài shāngliáng shāngliáng.

Maybe you could have a discussion and decide whether to take the treatment or not.

9. Relative: 不用商量。

Bùyòng shāngliáng.

There is no need to do so.

As in example 5, doctors were not trusted because they gave inconsistent information when treating the patient. However, trust was repaired after the doctor explained the situation to the relative. When explaining the situation, some rapport management strategies were used (Spencer-Oatey, 2000). For example, the doctor used an empathy strategy when they said "the pregnant is like our family". It can be seen from example 5 and example 4 that a doctor could be trusted because of his/her reliability. When reliability is broken down, rapport management strategies (such as showing empathy to others) can repair the non-trust relationship.

5. Discussion and suggestion

Through the analysis of the collected data, this paper has found the interrelationship among trust, cooperativity and reliability. This section will discuss the findings and offer suggestions for constructing trust between doctors and patients (and their relatives). First, according to the discourse evidence discussed in section 4, this paper draws the interrelationship among trust, cooperativity, and reliability, as shown in figure 1.

FIGURE 1

Interrelationship among trust, cooperativity and reliability
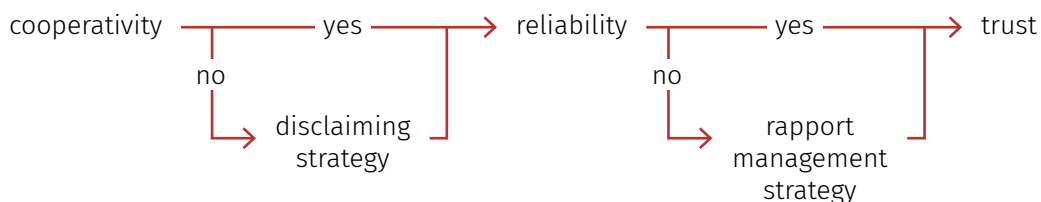
We can find in figure 1 that cooperativity may not always lead to direct trust in the medical context. It can be seen from the conversations between doctors and patients (and their relatives) that patients may not trust doctors even if they are cooperative (e. g., providing truthful information). The discourse evidence proves that cooperativity will not lead to trust directly or, at least, cooperativity is not the only precedent of trust. Even though cooperativ-

ity is not the only precedent of trust, one still needs to adhere to the Gricean maxims (Grice, 1975, 1989) if he/she wants to build trust, for cooperativity is not only a moral order or a kind of convention that we should obey (Haugh, 2013) but also contributes to the construction of reliability (McCready, 2015).

Another thing we must take note of is the close relationship between cooperativity and reliability. This implies that, on the one hand, the cooperativity of the speaker can enhance his/her reliability. One ought to provide truthful information or appropriate information to ensure their reliability as much as possible (Ephratt, 2012). On the other hand, there are times when the speaker may fail to ensure cooperativity. For instance, the speaker may intentionally violate cooperation principles (Grice, 1975, 1989), thus achieving specific communicative effects. To avoid situations where reliability is diminished due to non-cooperativity, the speaker can employ appropriate linguistic strategies to enhance reliability (Davies, 2007; McCready, 2015). These linguistic strategies include hedges or hypothesizing mitigators.

What's more, one's reliability will directly lead to others' trust. The conversations between doctors and patients prove that the patients trust the doctors because of their high reliability. However, some linguistic strategies could still be used to repair trust if one's reliability has been broken down (based on the other party's experience). Unlike the previous findings that denial or apology strategies repair doctors' trust (Fuoli, 2016; Fuoli and Hart, 2018), this paper found that rapport strategies could contribute to repairing doctors' trust. Specifically, this paper found that a trusting relationship could be built when doctors' languages show empathy to the patients.

Furthermore, it can be inferred from the discourse evidence that trust can be constructed directly through the maintenance or repair of reliability or indirectly through cooperativity or mitigating strategies (Davies, 2007). That is, a good reputation ranks higher than a cooperative action in the medical context (McCready, 2015). If the doctor's reliability has already broken down, the doctor can use linguistic manipulations to repair trust (Fuoli, 2016; Fuoli and Hart, 2018). As such, the best way to construct trust is by providing the appropriate amount of information and engaging in language manipulation through linguistic strategies. As such, this study proposes the following discourse strategies to enhance trust between doctors and patients:

The first suggestion is for doctors to maintain a good reputation in doctor-patient interaction. To uphold a good reputation, doctors should adhere to the quantity maxim of the cooperation principle (Grice, 1975, 1989) and provide vital and necessary information to patients (and their relatives). A common mistake doctors often make in doctor-patient interactions is overlooking information they assume to be common sense. However, these pieces of information deemed common sense may be crucial new information for many

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient...

176

patients (Song, 2017). When patients (and their relatives) fail to receive this information, there is a potential for misunderstanding the doctor's utterances. It increases the risk of patients distrusting the doctor.

In addition, the doctor should refrain from giving redundant medical implicatures to the patients because they may misunderstand the information and take problematic actions. To avoid misunderstandings between doctors and patients, doctors should especially refrain from making promises to patients when they are not confident enough to treat them well (Gale et al., 2011). The reason is that the patients will have expectations based on the doctor's promise, which will break down trust if the promise cannot be fulfilled (Sperber et al., 2010). Additionally, doctors should not provide a therapeutic regimen or disease forecast hastily, especially when the disease is uncertain. If a doctor revises the therapeutic regimen when he/she finds that he/she has set up misaligned expectations, the trust from patients will break down.

Another suggestion is rebuilding trust through appropriate linguistic strategies if the doctor's reputation has broken. The best way to regain trust is through rapport management strategies, such as empathy-related discourse (Spencer-Oatey, 2000). By using these strategies, the doctor can become involved on the patient's side, which will lead to a positive result. Aside from rapport management strategies, a doctor can also use hedges or hypothesizing mitigators to lower the risk of not fulfilling the patient's expectations (Davies, 2007; Resche, 2015). By using hedges or hypothesizing mitigators, one can avoid taking responsibility for risks, and the relationship between doctor and patient can be mediated (Yang, 2013).

6. Conclusion

This paper aims to find out the interrelationships among trust, cooperativity and reliability. Based on a discourse analysis of conversations between doctors and patients, this paper found that trust can be constructed directly through reliability-related strategies or indirectly through cooperativity-related strategies. The former refers to the speaker enhancing their credibility through reputation enhancement or rapport management strategies. The latter refers to the speaker ensuring cooperativity by providing truthful information or using responsibility-disclaiming strategies. The research findings in this paper refresh the understanding of the relationships among trust, cooperativity and reliability, and contribute to the construction of trust relations between doctors and patients in a medical context. Now that we have elucidated the interrelationship among trust, cooperativity, and reliability, subsequent research necessitates further analysis on how to employ appropriate discourse strategies to manifest the speaker's cooperativeness and reliability, thereby enhancing credibility.

ONOMÁZEIN 63 (March 2024): 161 - 180
Kun Yang
The interrelationship among trust, cooperativity and reliability: an analysis of doctor-patient…

177

7. References

Adoutte, André, Guillaume Balavoine, Nicolas Lartillot, Olivier Lespinet, Benjamin Prud'homme and Renaud de Rosa, 2000: "The new animal phylogeny: Reliability and implications", *Proceedings of the National Academy of Science* 97 (9), 4453-4456.

Aikhenvald, Alexandra Y., 2004: "Evidentialityity in Grammar" in Keith Brown (ed.): *Encyclopedia of Language & Linguistics (Second Edition)*, Elsevier: Pergamon Press, 320-325.

Audi, Robert, 2002: "The source of knowledge" in Paul K. Moser (ed.): *The Oxford Handboook of Epistemology*, Oxford: Oxford University Press, 71-94.

Beck, Ulrich, 1992: *Risk Society: Towards a new modernity*, London: Sage Press.

Bloomquist, Jennifer, 2010: "Lying, cheating, and stealing: A study of categorical misdeeds", *Journal of Pragmatics* 42, 1595-1605.

Candlin, Christopher, and Jonathan Crichton, 2013: *Discourses of Trust*, Palgrave Macmillan Press.

Coombs, W. Timothy, and Sherry J. Holladay, 2008: "Comparing Apology to Equivalent Crisis Response Strategies: Clarifying Apology's Role and Value in Crisis Communication", *Public Relations Review* 34, 252-257.

Cox, James C., and Wafa Hakim Orman, 2015: "Trust and trustworthiness of immigrants and native-born Americans", *Journal of Behavioral and Experimental Economics* 57, 1-8.

Czerwionka, Lori, 2012: "Mitigation: The combined effects of imposition and certitude", *Journal of Pragmatics* 44 (10), 1163-1182.

Davies, Bethan L., 2007: "Grice's Cooperative Principle: Meaning and rationality", *Journal of Pragmatics* 39, 2308-2331.

Deng, Shengli, Yanqing Lin, Yong Liu, Xiaoyu Chen and Hongxiu Li, 2017: "How do personality traits shape information-sharing behaviour in social media? Exploring the mediating effect of generalized trust", *Information Research-An International Electronic Journal* 22 (3), 1-24.

Ephratt, Michal, 2012: "'We try harder' - Silence and Grice's Cooperative Principle, maxims and implicatures", *Language & Communication* 32, 62-79.

Falcone, Rino, Munindar Singh and Yao-Hua Tan, 2001: *Trust in Cyber Societies*, Pittsburgh.

Fuoli, Matteo, 2016: "Building a trustworthy corporate identity: A Corpus Based Analysis of Stance in Annual and Corporate Social Responsibility Reports", *Applied Linguistics* 39 (6), 846-885.

Fuoli, Matteo, and Christopher Hart, 2018: "Trust-building strategies in corporate discourse: An experimental study", *Discourse & Society* 29 (5), 514-552.

Fuoli, Matteo, and Carita Paradis, 2014: "A model of trust-repair discourse", *Journal of Pragmatics* 74, 52-69.

Fuoli, Matteo, Joost van de Weijer and Carita Paradis, 2017: "Denial Outperforms Apology in Repairing Organizational Trust Despite Strong Evidence of Guilt", *Public Relations Review* 43, 645-660.

Gale, Nicola K., Sheila Greenfield, Paramjit Gill, Kerry Gutridge and Tom Marshall, 2011: "General practitioner attitudes to taking medication to prevent cardiovascular disease after receiving detailed information on risks and benefits of treatment: a qualitative study", *BMC Family Practice* 12, 1-10.

Gambetta, Diego, 1988: *Trust: Making and Breaking Cooperative Relations*, New York: Basil Blackwell.

Gillespie, Nicole, and Graham Dietz, 2009: "Trust Repair After An Organization-Level Failure", *Academy of Management Review* 34 (1), 127-145.

Grice, H. Paul, 1975: "Logic and Conversation" in Peter Cole and Jerry L. Morgan (eds.): *Syntax and Semantics*, New York: Academic Press.

Grice, H. Paul, 1989: *Studies in the Way of Words*, Cambridge: Harvard University Press.

Hall, Christopher, Åsa Mäkitalo, Stef Slembrouck and Paula Doherty, 2013: "Pursuing trust in child protection meetings: familiarization and informality" in Christopher Candlin and Jonathan Crichton (eds.): *Discourses of Trust*, Palgrave Macmillan Press, 100-115.

Hardin, Russell, 2001: "Trust and Society" in Gianluigi Galeotti, Pierre Salmon and Ronald Wintrobe (ed.): *Competition and Structure: The Political Economy of Collective Decisions: Essays in Honour of Albert Breton*, Cambridge: Cambridge University Press, 17-46.

Haugh, Michael, 2013: "Speaker meaning and accountability in interaction", *Journal of Pragmatics* 48 (1), 41-56.

Hoang, Jenny K., 2017: "Do Not Hedge When There Is Certainty", *Journal of the American College of Radiology* 14 (1), 5.

Jones, Alan, and Samantha Sin, 2013: "Achieving Professional Trustworthiness: Communicative Expertise and Identity Work in Professional Accounting Practice" in Christopher Candlin and Jonathan Crichton (eds.): *Discourses of Trust*, Palgrave Macmillan Press, 151-166.

Lehtinen, Esa, 2013: "Hedging, knowledge and interaction: Doctors' and clients' talk about medical information and client experiences in genetic counseling", *Patient Education and Counseling* 92 (1), 31-37.

Lindskold, Svenn, 1978: "Trust Development, the GRIT Proposal, and the Effects of Conciliatory Acts on Conflict and Cooperation", *Psychological Bulletin* 8, 772-793.

Lorenzo-Dus, Nuria, and Cristina Izura, 2017: "'cause ur special': Understanding trust and complimenting behaviour in online grooming discourse", *Journal of Pragmatics* 112, 68-82.

Mayer, Roger C., James H. Davis and F. David Schoorman, 1995: "An integrative model of organizational trust", *Academic Management Review* 20 (3), 709-734.

McCready, Eric S., 2015: *Reliability in Pragmatics*, Oxford: Oxford University Press.

Metzger, Miriam J., and Andrew J. Flanagin, 2013: "Credibility and trust of information in online environments: The use of cognitive heuristics", *Journal of Pragmatics* 59, 210-220.

Pelsmaekers, Katja, Craig Rollo and Geert Jacobs, 2014: *Trust and Discourse: Organizational Perspective*, Amsterdam: John Benjamins Publishing Company.

Pennings, Helena J. M., Mieke Brekelmans, Pamela Sadler, Luce C. A. Claessens, Anna C. van der Want and Jan van Tartwijk, 2018: "Interpersonal adaptation in teacher-student interaction", *Learning and Instruction* 55, 41-57.

Pfarrer, Michael D., Timothy G. Pollock and Violina P. Rindova., 2010: "A tale of two assets: the effects of firm reputation and celebrity on earnings surprises and investors' reactions", *Academy of Management Journal* 53 (5), 1131-1152.

Pym, Anthony, 2015: "Translating as risk management", *Journal of Pragmatics* 85, 67-80.

Resche, Catherine, 2015: "Hedging in the discourse of central banks", *Studies in Communication Sciences* 15, 83-92.

Rotter, Julian B., 1971: "Generalized Expectancies for Interpersonal Trust", *American Psychologist* 26, 443-452.

Rousseau, Denise M., Sim B. Sitkin, Ronald S. Burt and Colin Camerer, 1998: "Not so different after all: A cross-discipline view of trust", *Academy of Management Review* 23 (3), 393-404.

Shapiro, Susan P., 1987: "The Social Control of Impersonal Trust", *American Journal of Sociology* 93, 623-658.

Song, Sooho, 2017: "The Brown and Levinson theory revisited: A statistical analysis", *Language Sciences* 62, 66-75.

Sowińska, Agnieszka, and Małgorzata Sokół., 2018: "'Luckily, she's alive': Narratives of vicarious experience told by Polish doctors", *Journal of Pragmatics*, 1-13.

Spencer-Oatey, Helen, 2000: *Culturally Speaking Culture, Communication and Politeness Theory*, New York: Continuum International Publishing Group.

Sperber, Dan, Fabrice Clément, Christophe Heintz, Olivier Mascaro, Hugo Mercier, Gloria Origgi and Deirdre Wilson, 2010: "Epistemic Vigilance", *Mind & Language* 25 (4), 359-393.

Thomas, Jenny A., 1995: *Meaning in Interaction: An Introduction to Pragmatics*, New York: Pearson Education Limited.

Torpey, Michael J., and Neil H. Johnson, 2013: "Goffman's theory of self and the social order: trust and conflict in an intercultural education workplace" in Christopher Candlin and Jonathan Crichton (eds.): *Discourses of Trust*, Palgrave Macmillan Press, 133-148.

Tseng, Ming-Yu, and Grace Zhang, 2018: "Pragmeme, adaptability, and elasticity in online medical consultations", *Journal of Pragmatics* 137, 40-56.

Vass, Holly, 2017: "Lexical verb hedging in legal discourse: The case of law journal articles and Supreme Court majority and dissenting opinions", *English for Specific Purposes* 48, 17-31.

Wilk, Adam S., and Jodyn E. Platt, 2016: "Measuring physicians' trust: A scoping review with implications for public policy", *Social Science & Medicine* 165, 75-81.

Yang, Yingli, 2013: "Exploring linguistic and cultural variations in the use of hedges in English and Chinese scientific discourse", *Journal of Pragmatics* 50, 23-36.

Zheng, SiJing, SiJing Zheng, SiuFu Hui and ZhiLin Yang, 2017: "Hospital trust or doctor trust? A fuzzy analysis of trust in the health care setting", *Journal of Business Research* 78, 217-225.