

## Supplementary Materials for “How to Study Trust in AI-Assisted Decision Making? A Survey of Empirical Methodologies”

### 1 TRUST DEFINITIONS

- (1) “an attitude that an agent will achieve an individual’s goals in a situation characterized by uncertainty and vulnerability” by **Lee and See** [11] and **Lee and Moray** [10] (n=9, 11.25%);
- (2) “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that party” by **Mayer** [14] (n=5, 6.25%);
- (3) “evolving affective state including both cognitive and affective elements and emerges from the perceptions of competence and a positive, caring motivation in the relationship partner to be trusted” by **Ekman** [7], which is stated to be a combination of the definitions by Lee and See [11] and Mayer et al. [14] (n=1, 1.25%);
- (4) “the extent to which a user is confident in, and willing to act on the basis of, the recommendations, actions, and decisions of an artificially intelligent decision aid” by **Madsen** [12] (adapted from McAllister [15]) (n=2, 2.5%);
- (5) “an evolving, affective state including both cognitive and affective elements and emerges from the perceptions of competence and a positive, caring motivation in the relationship partner to be trusted” by **Young and Albaum** [23] (n=1, 1.25%);
- (6) “a psycho-physiological state that involves a firm belief about another’s intention and one’s willingness to act by following their words, expressions, decisions, or actions” by **Bonn and Holmes** [1] (n=1, 1.25%);
- (7) “a psychological state, resulting from knowledge, beliefs, and assessments related to the decision-making situation, which creates confident expectations for human-machine system performance and guides operator reliance on automation” by **Rajaonah et al.** [20] (n=1, 1.25%);
- (8) proposed **their own definition**: “a relationship between two entities(trustor: users and trustee: AI technologies) guided by compound cognitive processes (mental deliberation, reasoning and mental processing involving memory, learning and accumulated knowledge) during the evaluation of the trustworthiness of a trustee(AI technology) by a trustor (user) based on the accumulation of the following: trustor’s (user’s) intentions, beliefs, and anticipated behaviors” inspired by [2], [4] (n=1, 1.25%);
- (9) “confidence in a robot’s decision-making capabilities and therefore the likelihood to follow those decisions” with a **flawed source** stated (n=1, 1.25%);
- (10) “a latent (hidden, unobservable) variable that summarizes (mental model) past experience with an agent/robot, which is useful for predicting future behavior of the trustee and making a decision to put oneself in a position of vulnerability” with **no source** stated (n=1, 1.25%);
- (11) “how confident an individual is in the abilities of the other members of the group” with **no source** stated (n=1, 1.25%).

## 2 TRUST QUESTIONNAIRES USED IN HUMAN-AI LITERATURE

### 2.1 Human Trust in Automation Scale by Jian et al.

By **Jian et al**[9]. Instructions: Below is a list of statements for evaluating trust between people and automation. There are several scales for you to rate intensity of your feeling of trust, or your impression of the system while operating a machine. Please select the option which best describes your feeling or your impression using the 7-point scale ranging from 1 (not at all) to 7 (extremely).

- The system is deceptive. (R - reverse coded items)
- The system behaves in an underhanded (concealed) manner. (R)
- I am suspicious of the system's intent, action, or outputs. (R)
- I am wary of the system. (R)
- The system's actions will have a harmful or injurious outcome. (R)
- I am confident in the system.
- The system provides security.
- The system has integrity.
- The system is dependable.
- The system is reliable.
- I can trust the system.
- I am familiar with the system.

### 2.2 Trust in Automation by Muir

By Muir [18]. Please select a value from 1 to 10, where 1 = Not at all and 10 = Completely.

- To what extent can the system's behavior be predicted from moment to moment?
- To what extent can you count on the system to do its job?
- What degree of faith do you have that the system will be able to cope with all systems "states in the future"?
- Overall how much do you trust the system?

### 2.3 Human-Computer Trust Scale (HCT) by Madsen

By [12].

#### (1) *Perceived Reliability*

- R1) The system always provides the advice I require to make my decision.
- R2) The system performs reliably.
- R3) The system responds the same way under the same conditions at different times.
- R4) I can rely on the system to function properly.
- R5) The system analyzes problems consistently.

#### (2) *Perceived Technical Competence*

- T1) The system uses appropriate methods to reach decisions.
- T2) The system has sound knowledge about this type of problem built into it.
- T3) The advice the system produces is as good as that which a highly competent person could produce.
- T4) The system correctly uses the information I enter.
- T5) The system makes use of all the knowledge and information available to it to produce its solution to the problem.

#### (3) *Perceived Understandability*

- U1) I know what will happen the next time I use the system because I understand how it behaves.
- U2) I understand how the system will assist me with decisions I have to make.

U3) Although I may not know exactly how the system works, I know how to use it to make decisions about the problem.

U4) It is easy to follow what the system does.

U5) I recognize what I should do to get the advice I need from the system the next time I use it.

(4) *Faith*

F1) I believe advice from the system even when I don't know for certain that it is correct.

F2) When I am uncertain about a decision I believe the system rather than myself.

F3) If I am not sure about a decision, I have faith that the system will provide the best solution.

F4) When the system gives unusual advice I am confident that the advice is correct.

F5) Even if I have no reason to expect the system will be able to solve a difficult problem, I still feel certain that it will.

(5) *Personal Attachment*

P1) I would feel a sense of loss if the system was unavailable and I could no longer use it.

P2) I feel a sense of attachment to using the system.

P3) I find the system suitable to my style of decision making.

P4) I like using the system for decision making.

P5) I have a personal preference for making decisions with the system.

## 2.4 Trust in Teammate by Ross

By [21]. Questions 9 and 10 of this survey seem not to be included.

1. To what extent does Teammate A perform this search-and-rescue task effectively?

Very Little 1 2 3 4 5 6 7 8 9 A Great Amount

5. To what extent can you anticipate Teammate A's behavior with some degree of confidence?

Very Little 1 2 3 4 5 6 7 8 9 A Great Amount

3. To what extent is the Teammate A free of errors?

Very Little 1 2 3 4 5 6 7 8 9 A Great Amount

4. To what extent do you have a strong belief and trust in Teammate A to do the search-and-rescue task in the future without being monitored?

Very Little 1 2 3 4 5 6 7 8 9 A Great Amount

5. How much did you trust the decisions of Teammate A overall?

Very Little 1 2 3 4 5 6 7 8 9 A Great Amount

6. What percentage of responses by Teammate A do you think were correct?

\_\_\_\_\_ (enter a value between 0% to 100%)

7. How often did you notice an error made by Teammate A?

Not At All 1 2 3 4 5 6 7 8 9 Many Times

8. To what extent did you lose trust in Teammate A when you noticed it made an error?

Very Little 1 2 3 4 5 6 7 8 9 A Great Amount

## 2.5 Semantic Pairs for Credibility by Ohanian

By [19].

### Attractiveness

Attractive-Unattractive

Classy-Not Classy

Beautiful-Ugly

Elegant-Plain

Sexy-Not sexy

### Trustworthiness

Dependable-Undependable

Honest-Dishonest

Reliable-Unreliable

Sincere-Insincere

Trustworthy-Untrustworthy

### Expertise

Expert-Not an expert

Experienced-Inexperienced

Knowledgeable-Unknowledgeable

Qualified-Unqualified

Skilled-Unskilled

## 2.6 Trust in Automation by Chien et al.

By [3], encompassing the cultural aspects.

Dimension	Survey Items	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<i>General: Automation, Performance, Expectancy</i>	Using a smart phone increases my effectiveness on my jobs.	1	2	3	4	5
	Using a smart phone will improve my output quality.	1	2	3	4	5
	Using a smart phone will increase my chances of achieving a higher level of performance.	1	2	3	4	5
<i>General: Automation, Process, Transparency</i>	The information that a smart phone provides is of high quality.	1	2	3	4	5
	A smart phone provides sufficient information.	1	2	3	4	5
	I am satisfied with the information that a smart phone provides.	1	2	3	4	5
<i>General: Automation, Cultural-Technological Context</i>	I prefer to use a smart phone to make decisions under high workload situations.	1	2	3	4	5
	Using a smart phone helps me to expend less effort to accomplish tasks.	1	2	3	4	5
	Using a smart phone helps me accomplish tasks with lower risks.	1	2	3	4	5
<i>Specific: Automation, Performance, Expectancy</i>	GPS improves my performance.	1	2	3	4	5
	GPS enables me to accomplish tasks more quickly.	1	2	3	4	5
	GPS increases my productivity.	1	2	3	4	5
<i>Specific: Automation, Process, Transparency</i>	My interaction with GPS is clearly understandable.	1	2	3	4	5
	GPS is user-friendly.	1	2	3	4	5
	GPS uses appropriate methods to reach decisions.	1	2	3	4	5
<i>Specific: Automation, Purpose, Influence</i>	I am confident about the performance of GPS	1	2	3	4	5
	When an emergent issue or problem arises, I would feel comfortable depending on the information provided by GPS.	1	2	3	4	5
	I can always rely on GPS to ensure my performance.	1	2	3	4	5

## 2.7 Pedestrian Receptivity Questionnaire by Deb et al.

By [6]. A fully autonomous vehicle (FAV) is driven by technology instead of by a human. A FAV is equipped with radars, cameras, and sensors which can detect the presence, position, and speed of other vehicles or road-users. With this information, the FAV can then respond as needed by stopping, decelerating and/or changing direction. A driverless vehicle has the potential to reduce pedestrian-motor vehicle crashes and to decrease the possibility of severe injuries by controlling the driving task effectively. You have recently learned that there will be fully autonomous vehicles on the road in your area. As you consider this, how much would you agree or disagree with the following statements.

All items will be measured on the following 7-point Likert scale:

1 = strongly disagree; 2 = moderately disagree; 3 = somewhat disagree; 4 = neutral (neither disagree nor agree); 5 = somewhat agree; 6 = moderately agree; 7 = strongly agree

Note: A-Attitude, S-Social norms, E-Effectiveness, T-Trust, C-Compatibility. Higher scores indicate higher receptivity toward FAV.

1. (A) FAVs will enhance the overall transportation system.
2. (A) FAVs will make the roads safer.
3. (A) I would feel safe to cross roads in front of FAVs.
4. (A) It would take less effort from me to observe the surroundings and cross roads if there are FAVs involved.
5. (A) I would find it pleasant to cross the road in front of FAVs.
6. (S) People who influence my behavior would think that I should cross roads in front of FAVs.
7. (S) People who are important to me would not think that I should cross roads in front of FAVs. [reverse-scaled]
8. (S) People who are important to me and/or influence my behavior trusts FAVs (or has a positive attitude towards FAVs).
9. (E) Interacting with the system would not require a lot of mental effort.
10. (E) FAV can correctly detect pedestrians on streets.
11. (T) I would feel comfortable if my child, spouse, parents – or other loved ones – cross roads in the presence of FAVs.
12. (T) I would recommend my family and friends to be comfortable while crossing roads in front of FAVs.
13. (T) I would feel more comfortable doing other things (e.g., checking emails on my smartphone, talking to my companions) while crossing the road in front of FAVs.
14. (C) The traffic infrastructure supports the launch of FAVs.
15. (C) FAV is compatible with all aspects of transportation system in my area.
16. (E, C) FAVs will be able to effectively interact with other vehicles and pedestrians.

## 2.8 Trust in Automation Questionnaire by Merrit

Trust scale items from [17]

- I believe the AWD is a competent performer
- I trust the AWD
- I have confidence in the advice given by the AWD
- I can depend on the AWD
- I can rely on the AWD to behave in consistent ways
- I can rely on the AWD to do its best every time I take its advice

## 2.9 Human-Robot Trust Questionnaire by Schaefer

By [22]. \* marks the questions that can be used for a shorter version of the questionnaire.

The R represents reverse coded items for scoring.

What % of the time will this robot...	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Act consistently*											
Protect people											
Act as part of the team											
Function successfully*											
Malfunction (R)											
Clearly communicate											
Require frequent maintenance (R)											
Openly communicate											
Have errors * (R)											
Perform a task better than a novice human user											
Know the difference between friend and foe											
Provide Feedback*											
Possess adequate decision-making capability											
Warn people of potential risks in the environment											
Meet the needs of the mission*											
Provide appropriate information*											
Communicate with people*											
Work best with a team											
Keep classified information secure											
Perform exactly as instructed*											
Make sensible decisions											
Work in close proximity with people											
Tell the truth											
Perform many functions at one time											
Follow directions*											
Be considered part of the team											
Be responsible											
Be supportive											
Be incompetent (R)											
Be dependable *											
Be friendly											
Be reliable *											
Be pleasant											
Be unresponsive* (R)											
Be autonomous											
Be predictable *											
Be conscious											
Be lifelike											
Be a good teammate											
Be led astray by unexpected changes in the environment											

## 2.10 Trust in E-Commerce by McKnight

By [16]

	<b>Disposition to Trust</b>
Benevolence (denoted DB in Figure 7)	<ol style="list-style-type: none"> <li>1. In general, people really do care about the well-being of others.</li> <li>2. The typical person is sincerely concerned about the problems of others.</li> <li>3. Most of the time, people care enough to try to be helpful, rather than just looking out for themselves.</li> </ol>
Integrity (DI)	<ol style="list-style-type: none"> <li>1. In general, most folks keep their promises.</li> <li>2. I think people generally try to back up their words with their actions.</li> <li>3. Most people are honest in their dealings with others.</li> </ol>
Competence (DC)	<ol style="list-style-type: none"> <li>1. I believe that most professional people do a very good job at their work.</li> <li>2. Most professionals are very knowledgeable in their chosen field.</li> <li>3. A large majority of professional people are competent in their area of expertise.</li> </ol>
Trusting Stance (ST)	<ol style="list-style-type: none"> <li>1. I usually trust people until they give me a reason not to trust them.</li> <li>2. I generally give people the benefit of the doubt when I first meet them.</li> <li>3. My typical approach is to trust new acquaintances until they prove I should not trust them.</li> </ol>
	<b>Institution-Based Trust</b>
Situational Normality-General (IG)	<ol style="list-style-type: none"> <li>1. I feel good about how things go when I do purchasing or other activities on the Internet.</li> <li>2. I am comfortable making purchases on the Internet.</li> </ol>
Situational Normality-Benevolence (IB)	<ol style="list-style-type: none"> <li>1. I feel that most Internet vendors would act in a customers' best interest.</li> <li>2. If a customer required help, most Internet vendors would do their best to help.</li> <li>3. Most Internet vendors are interested in customer well-being, not just their own well-being.</li> </ol>
Situational Normality-Integrity (II)	<ol style="list-style-type: none"> <li>1. I am comfortable relying on Internet vendors to meet their obligations.</li> <li>2. I feel fine doing business on the Internet since Internet vendors generally fulfill their agreements.</li> <li>3. I always feel confident that I can rely on Internet vendors to do their part when I interact with them.</li> </ol>
Situational Normality-Competence (IC)	<ol style="list-style-type: none"> <li>1. In general, most Internet vendors are competent at serving their customers.</li> <li>2. Most Internet vendors do a capable job at meeting customer needs.</li> <li>3. I feel that most Internet vendors are good at what they do.</li> </ol>
Structural Assurance (ISA)	<ol style="list-style-type: none"> <li>1. The Internet has enough safeguards to make me feel comfortable using it to transact personal business.</li> <li>2. I feel assured that legal and technological structures adequately protect me from problems on the Internet.</li> <li>3. I feel confident that encryption and other technological advances on the Internet make it safe for me to do business there.</li> <li>4. In general, the Internet is now a robust and safe environment in which to transact business.</li> </ol>
	<b>Trusting Beliefs</b>
Benevolence (TBB)	<ol style="list-style-type: none"> <li>1. I believe that LegalAdvice.com would act in my best interest.</li> <li>2. If I required help, LegalAdvice.com would do its best to help me.</li> <li>3. LegalAdvice.com is interested in my well-being, not just its own.</li> </ol>
Integrity (TBI)	<ol style="list-style-type: none"> <li>1. LegalAdvice.com is truthful in its dealings with me.</li> <li>2. I would characterize LegalAdvice.com as honest.</li> <li>3. LegalAdvice.com would keep its commitments.</li> <li>4. LegalAdvice.com is sincere and genuine.</li> </ol>
Competence (TBC)	<ol style="list-style-type: none"> <li>1. LegalAdvice.com is competent and effective in providing legal advice.</li> <li>2. LegalAdvice.com performs its role of giving legal advice very well.</li> <li>3. Overall, LegalAdvice.com is a capable and proficient Internet legal advice provider.</li> <li>4. In general, LegalAdvice.com is very knowledgeable about the law.</li> </ol>
	<b>Trusting Intentions</b>
Willingness to Depend (GN)	<ol style="list-style-type: none"> <li>1. When an important legal issue or problem arises, I would feel comfortable depending on the information provided by LegalAdvice.com.</li> <li>2. I can always rely on LegalAdvice.com in a tough legal situation.</li> <li>3. I feel that I could count on LegalAdvice.com to help with a crucial legal problem.</li> <li>4. Faced with a difficult legal situation that required me to hire a lawyer (<i>for a fee</i>), I would use the firm backing LegalAdvice.com.</li> </ol>
Subjective Probability of Depending— Follow Advice (FA)	<ol style="list-style-type: none"> <li>1. If I had a challenging legal problem, I would want to use LegalAdvice.com again.*</li> <li>2. I would feel comfortable acting on the landlord/tenant information given to me by LegalAdvice.com.</li> <li>3. I would not hesitate to use the landlord/tenant information LegalAdvice.com supplied me.</li> <li>4. I would confidently act on the legal advice I was given by LegalAdvice.com.</li> <li>5. I would feel secure in using the landlord/tenant information from LegalAdvice.com.</li> <li>6. Based on the advice I just read, I would serve notice, wait, go ahead and get the repair done, and then deduct the cost of the repair from my rent.</li> </ol>
Subjective Probability of Depending—Give Information (GI)	<p>Suppose you wanted more specific information about landlord/tenant relationships and you could consult (one time only) by telephone with one of the LegalAdvice.com lawyers for 15–30 minutes (<i>free of charge</i>). For this service, please answer the following:</p> <ol style="list-style-type: none"> <li>1. I would be willing to provide information like my name, address, and phone number to LegalAdvice.com.</li> <li>2. I would be willing to provide my social security number to LegalAdvice.com.</li> <li>3. I would be willing to share the specifics of my legal issue with LegalAdvice.com.</li> </ol>
Subjective Probability of Depending— Make Purchases (MP)	<p>Suppose the LegalAdvice.com site was <i>not free</i>, but charged to access information on the site. Answer the following questions:</p> <ol style="list-style-type: none"> <li>1. Faced with a difficult legal situation, I would be willing to pay to access information on the LegalAdvice.com Web site.</li> <li>2. I would be willing to provide credit card information on the LegalAdvice.com Web site.</li> <li>3. Given a tough legal issue, I would be willing to pay for a 30-minute phone consultation with a LegalAdvice.com lawyer.</li> </ol>

## 2.11 Trust in Management Questionnaire by Mayer

By Mayer [13]

### Measures of Trust, Trustworthiness, and Performance Appraisal Perceptions

The following instructions prefaced the scales. The anchors shown below were consistent throughout. Headings of construct names are for clarity of exposition, and were not included in the surveys.

Indicate the degree to which you agree with each statement by using the following scale:

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

Think about [company name]'s top management team [names listed in parentheses for clarity]. For each statement, write the number that best describes how much you agree or disagree with each statement.

#### Ability

- Top management is very capable of performing its job.
- Top management is known to be successful at the things it tries to do.
- Top management has much knowledge about the work that needs done.
- I feel very confident about top management's skills.
- Top management has specialized capabilities that can increase our performance.
- Top management is well qualified.

#### Benevolence

- Top management is very concerned about my welfare.
- My needs and desires are very important to top management.
- Top management would not knowingly do anything to hurt me.
- Top management really looks out for what is important to me.
- Top management will go out of its way to help me.

#### Integrity

- Top management has a strong sense of justice.
- I never have to wonder whether top management will stick to its word.
- Top management tries hard to be fair in dealings with others.
- Top management's actions and behaviors are not very consistent.\*
- I like top management's values.
- Sound principles seem to guide top management's behavior.

#### Propensity

- One should be very cautious with strangers.
- Most experts tell the truth about the limits of their knowledge.
- Most people can be counted on to do what they say they will do.
- These days, you must be alert or someone is likely to take advantage of you.
- Most salespeople are honest in describing their products.
- Most repair people will not overcharge people who are ignorant of their specialty.
- Most people answer public opinion polls honestly.
- Most adults are competent at their jobs.

#### Trust

- If I had my way, I wouldn't let top management have any influence over issues that are important to me.\*
- I would be willing to let top management have complete control over my future in this company.
- I really wish I had a good way to keep an eye on top management.\*
- I would be comfortable giving top management a task or problem which was critical to me, even if I could not monitor their actions.

Think about the performance review system at [company name], and answer the following questions.

#### Accuracy

- The evaluation of what skills I have is pretty accurate.
- How much work I get done is important to my performance review.
- How many mistakes I make in my work is important to my performance review.
- Whether or not my supervisor likes me is important to my performance review.\*
- How much effort I put into my job is important to my performance review.
- How many "extra" things I do is important to my performance review.
- Finding ways for the company to save money is important to my performance review.
- Coming up with good ideas for the company improves my performance review.

#### Outcome instrumentality

- Whether or not I get a raise depends on my performance.
- If you are one of the better performers in this company, you will get one of the better raises.
- If I perform well, my chances of moving up are improved.
- \*-Reverse-scored item.

Received February 27, 1997  
 Revision received June 15, 1998  
 Accepted June 16, 1998 ■



### 3 SELECTED HUMAN-HUMAN TRUST QUESTIONNAIRES

#### 3.1 Trust for Management Questionnaire

By [13]. See above.

#### 3.2 Behavioral Trust Inventory

By [8].

Note: Items 1–5 tap reliance-based trust and items 6–10 tap disclosure-based trust.

Please indicate how willing you are to engage in each of the following behaviors with your *Leader/Team Member/Follower*, by circling a number from 1 to 7.

	<i>Not at all willing</i>			<i>Completely willing</i>			
1. Rely on your leader's task related skills and abilities.	1	2	3	4	5	6	7
2. Depend on your leader to handle an important issue on your behalf.	1	2	3	4	5	6	7
3. Rely on your leader to represent your work accurately to others.	1	2	3	4	5	6	7
4. Depend on your leader to back you up in difficult situations.	1	2	3	4	5	6	7
5. Rely on your leader's work-related judgments.	1	2	3	4	5	6	7
6. Share your personal feelings with your leader.	1	2	3	4	5	6	7
7. Discuss work-related problems or difficulties with your leader that could potentially be used to disadvantage you.	1	2	3	4	5	6	7
8. Confide in your leader about personal issues that are affecting your work.	1	2	3	4	5	6	7
9. Discuss how you honestly feel about your work, even negative feelings and frustration.	1	2	3	4	5	6	7
10. Share your personal beliefs with your leader.	1	2	3	4	5	6	7

### 3.3 Trust Questionnaire by Currall and Judge

By [5].

168

CURRALL AND JUDGE

that Task Coordination is a central feature of all BRP relationships, involves use of all four dimensions of trust including Task Coordination. This option would be attractive to those who wish to study whether the overall level of BRP trust impacts interorganizational collaboration. To develop Task Coordination items for a particular organizational context, researchers should use the procedure we outlined in the Method section. To develop Task Coordination items, preliminary interviews must include open-ended questions asking how BRPs engage in trusting behavior ("reliance") in the context of Task Coordination. Prior to use in a final survey, these initial items should be refined by subjecting them to Ghiselli *et al.*'s (1981) process analysis.

#### APPENDIX: TRUST ITEMS

Instructions for the items read: "Answer the questions in terms of what you would actually do in dealing with the (counterpart BRP) . . ." The response format was: 1 = *extremely unlikely*, 2 = *quite unlikely*, 3 = *slightly unlikely*, 4 = *neither*, 5 = *slightly likely*, 6 = *quite likely*, and 7 = *extremely likely*. Item numbers correspond to their order in the surveys. Asterisks indicate reversed items.

##### *Communication Dimension Items*

1. Think carefully before telling the (counterpart BRP) my opinions.\*

7. Give the (counterpart BRP) all known and relevant information about important issues even if there is a possibility that it might jeopardize the (respondent's organization).

8. Give the (counterpart BRP) all known and relevant information about important issues even if there is a possibility that it might jeopardize my job as the (respondent's job).

12. Minimize the information I give to the (counter part BRP).\*

18. Deliberately withhold some information when communicating with the (counterpart BRP).\*

##### *Informal Agreement Dimension Items*

3. Enter into an agreement with the (counterpart BRP) even if his/her future obligations concerning the agreement are not explicitly stated.

5. Enter into an agreement with the (counterpart BRP) even if I think other people might try to persuade him/her to break it.

10. Enter into an agreement with the (counterpart BRP) even if it is unclear whether he/she would suffer any negative consequences for breaking it.

17. Decline the (counterpart BRP's) offer to enter into an unwritten agreement.\*

20. Suggest that the (counterpart BRP) and I enter into an unwritten agreement.

##### *Surveillance Dimension Items*

2. Watch the (counterpart BRP) attentively in order to make sure he/she doesn't do something detrimental to the (respondent's organization).\*

6. Keep surveillance over the (counterpart BRP) (i.e., "look over his/her shoulder") after asking him/her to do something.\*

9. Feel confident after asking the (counterpart BRP) to do something.

14. Check with other people about the activities of the (counterpart BRP) to make sure he/she is not trying to "get away" with something.\*

15. In situations other than contract negotiations, check records to verify facts stated by the (counterpart BRP).\*

##### *Task Coordination Dimension Items for Superintendents*

4. Ask the president to convince the membership of the local teacher's union to give support to a newly initiated cooperative program between teachers and school administrators.

11. Ask the president to convince several incompetent teachers to take early retirement.

13. Ask the president to stop false rumors about personnel decisions that are circulating among the teachers.

16. Ask the president to convince the teachers to file grievances only in extreme cases.

19. Rely on the president to convince the membership of the teachers' local to have realistic expectations about what contract changes will be made in the next negotiation.

##### *Task Coordination Dimension Items for Presidents*

4. Ask the superintendent to try to persuade the district's administrators to lend their support to a newly initiated cooperative program between teachers and administrators.

11. Rely on the superintendent to make decisions about teacher transfers and assignments with a genuine concern for teacher job preferences.

13. Rely on the superintendent to dismiss teachers only in cases when poor performance has been clearly and impartially demonstrated.

16. Rely on the superintendent to solve a grievance through informal and cooperative discussions.

19. Rely on the superintendent to adhere to the collective bargaining contract.

## REFERENCES

- [1] S. Boon and J. Holmes. 1991. The dynamics of interpersonal trust: resolving uncertainty in the face of risk. In *Cooperation and Prosocial Behaviour*, R. Hinde and J. Gorebel (Eds.). Cambridge University Press, Cambridge, 190–211.
- [2] Sviatoslav Braynov. 2013. What Human Trust Is and Is Not: On the Biology of Human Trust. *AAAI Spring Symposium: Trust and Autonomous Systems* (2013), 10–15.
- [3] Shih-Yi Chien, Michael Lewis, Katia Sycara, Jyi-Shane Liu, and Asiye Kumru. 2018. The Effect of Culture on Trust in Automation: Reliability and Workload. *ACM Trans. Interact. Intell. Syst.* 8, 4, Article 29 (Nov. 2018), 31 pages. <https://doi.org/10.1145/3230736>
- [4] Jin-Hee Cho, Kevin Chan, and Sibel Adali. 2015. A Survey on Trust Modeling. *ACM Comput. Surv.* 48, 2, Article 28 (Oct. 2015), 40 pages. <https://doi.org/10.1145/2815595>
- [5] Steven C. Currall and Timothy A. Judge. 1995. Measuring trust between organizational boundary role persons. *Organizational Behavior and Human Decision Processes* 64, 2 (1995), 151–170. <https://doi.org/10.1006/obhd.1995.1097>
- [6] Shuchisnigdha Deb, Lesley Strawderman, Daniel W. Carruth, Janice DuBien, Brian Smith, and Teena M. Garrison. 2017. Development and validation of a questionnaire to assess pedestrian receptivity toward fully autonomous vehicles. *Transportation Research Part C: Emerging Technologies* 84 (2017), 178 – 195. <https://doi.org/10.1016/j.trc.2017.08.029>
- [7] Fredrick Ekman, Mikael Johansson, and Jana Sochor. 2016. Creating Appropriate Trust for Autonomous Vehicle Systems: A Framework for HMI Design. *IEEE Transactions on Human-Machine Systems* 48, 1 (01 2016), 95–101.
- [8] Nicole Gillespie. 2003. *Measuring trust in working relationships: The behavioral trust inventory*. Melbourne Business School, Melbourne, Australia.
- [9] Jiun-Yin Jian, Ann M. Bisantz, and Colin G. Drury. 2000. Foundations for an Empirically Determined Scale of Trust in Automated Systems. *International Journal of Cognitive Ergonomics* 4, 1 (2000), 53–71. [https://doi.org/10.1207/S15327566IJCE0401\\_04](https://doi.org/10.1207/S15327566IJCE0401_04)
- [10] John Lee and Neville Moray. 1992. Trust, control strategies and allocation of function in human-machine systems. *Ergonomics* 35, 10 (1992), 1243–1270. <https://doi.org/10.1080/00140139208967392>
- [11] John Lee and Katrina See. 2004. Trust in Automation: Designing for Appropriate Reliance. *Human factors* 46 (February 2004), 50–80. <https://doi.org/10.1518/hfes.46.1.50.30392>
- [12] Maria A. Madsen and Shirley Gregor. 2000. Measuring Human-Computer Trust. In *Proceedings of the 11 th Australasian Conference on Information Systems*. Australasian Conference on Information Systems (ACIS), Brisbane, Australia, 6–8.
- [13] James H. Mayer, Roger C. Davis. 1999. The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Business and Industrial Personnel* 84, 1 (1999), 123–136. <https://doi.org/10.1037/0021-9010.84.1.123>
- [14] Roger C. Mayer, James H. Davis, and F. David Schoorman. 1995. An Integrative Model of Organizational Trust. *The Academy of Management Review* 20, 3 (1995), 709–734. <http://www.jstor.org/stable/258792>
- [15] Daniel J. McAllister. 1995. Affect- and Cognition-Based Trust as Foundations for Interpersonal Cooperation in Organizations. *The Academy of Management Journal* 38, 1 (1995), 24–59. <http://www.jstor.org/stable/256727>
- [16] D. Harrison McKnight, Vivek Choudhury, and Charles Kacmar. 2002. Developing and Validating Trust Measures for e-Commerce: An Integrative Typology. *Information Systems Research* 13, 3 (2002), 334–359. <https://doi.org/10.1287/isre.13.3.334.81>
- [17] Stephanie M. Merritt. 2011. Affective Processes in Human-Automation Interactions. *Human Factors* 53, 4 (2011), 356–370. <https://doi.org/10.1177/0018720811411912> arXiv:<https://doi.org/10.1177/0018720811411912>
- [18] B.M. Muir. 1989. *Operators' Trust in and Use of Automatic Controllers in a Supervisory Process Control Task*. University of Toronto, Toronto, Canada. <https://books.google.fr/books?id=T94NSwAACAAJ>
- [19] Roobina Ohanian. 1990. Construction and Validation of a Scale to Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness, and Attractiveness. *Journal of Advertising* 19, 3 (oct 1990), 39–52. <https://doi.org/10.1080/00913367.1990.10673191>
- [20] Bako Rajaonah, Françoise Anceaux, and Fabrice Vienne. 2006. Study of driver trust during cooperation with adaptive cruise control. *Le travail humain* 69, 2 (2006), 99–127. <https://doi.org/10.3917/th.692.0099>
- [21] Jennifer M. Ross. 2008. *Moderators of trust and reliance across multiple decision aids*. Ph.D. Dissertation. Department of Psychology in the College of Sciences at the University of Central Florida.
- [22] Kristin E. Schaefer. 2013. *The Perception And Measurement Of Human-robot Trust*. Ph.D. Dissertation. Department of Psychology in the College of Sciences at the University of Central Florida.
- [23] Beste F. Yuksel, Penny Collisson, and Mary Czerwinski. 2017. Brains or Beauty: How to Engender Trust in User-Agent Interactions. *ACM Trans. Internet Technol.* 17, 1 (2017), 20. <https://doi.org/10.1145/2998572>