Defining the concept and clinical features of Epistemic Trust: a Delphi study

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Abstract

Early identification of 'patients at risk' for not completing regular treatment or not benefitting (sufficiently) might be among the most cost-effective strategies in mental health care. In an earlier paper (Knapen, Hutsebaut, van Diemen & Beekman, 2019), we introduced the potential value of the concept of epistemic trust (ET) as a measurable predictor or 'psychomarker' of treatment outcome. This value of ET may not only be limited to mental health treatment, but to *any* social intervention that depends on trust in others.

In order to be able to measure ET as a potential psychomarker, it becomes necessary to render the concept of ET accessible for assessment. A clinically feasible way to assess ET would be to rely upon patients self-report, by designing questionnaires that represent clinical features of ET. For this, consensus is needed on the definition and clinical features of ET. We therefore conducted a Delphi study to reach consensus on the definition of epistemic trust and its characteristics. The Delphi method is a consensus-building technique using expert opinion to formulate a shared framework for understanding a topic or theoretical concept with limited empirical support.

In this paper we define epistemic trust by describing its core domains based on consensus of expert opinion on the concept. Based on this, we aim to develop items for a new self-report questionnaire to assess ET.

Introduction

Early identification of 'patients at risk' for not completing regular treatment or not benefitting (sufficiently) might be among the most cost-effective strategies in mental health care. If we were able to identify patients at risk of not completing treatment or only partially benefitting from treatment, it could help us to a more personalized approach to treatment assignment by tailoring specific needs for treatment to the specific characteristics of a patient.

In an earlier paper (Knapen, Hutsebaut, van Diemen & Beekman, 2019), we introduced the potential value of the concept of epistemic trust (ET) as a measurable predictor or 'psychomarker' of treatment outcome. We argued that ET may be a final pathway through which aversive relational experiences in the past result in interpersonal dysfunctioning, which in turn results in dysfunctional therapeutic relationships, rendering it difficult for patients to trust whatever is offered to learn in therapy. Obviously, this has its effect on the efficacy of treatment. In our view, ET is the most proximal of these factors and can be measured as a predisposition of the patient's general tendency to learn from others, which potentially can predict benefit (or lack of) from (specific) treatment approaches. Therefore, the concept of ET can play an essential role in personalized medicine, allowing for a more tailored treatment assignment to specific patients' characteristics, which improves treatment outcome (US Food and Drug Administration, 2013).

ET refers to the predisposition of a person to accept and trust that the information of other persons is authentic, trustworthy, generalizable and relevant to the self (Fonagy & Allison 2014; Fonagy, Luyten & Allison 2015; Fonagy, Luyten, Allison & Campbell 2017b). ET predicts to what extend someone will accept social information from others, and therefore also determines someone's capability to be able to learn from therapy. ET could

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accordingly act as a psychomarker and predict outcome of psychosocial interventions. The promise of personalised medicine is to get the right treatment to the right patient through the use of bio- or psychomarkers. Unfavourable effects of treatment can be avoided, and interventions can be tailored to the special needs of a patient, which will also enhance cost-effectiveness. The potential predictive value of ET may not only be limited to mental health treatment, but to *any* social intervention that depends on trust in others. For example, the effectiveness of various other treatments, like pharmacotherapy, diabetes treatment, dietary advice for overweight or social interventions like advice on childcare, may all be dependent on the openness to learn socially from others.

In order to be able to measure ET as a potential psychomarker, it becomes necessary to render the concept of ET accessible for assessment. Previous efforts to measure ET used experimental procedures to assess ET as ability Both Egyed and Corriveau studied ET through investigating how new information is processed by toddlers (Egyed, Király, & Gergely 2013; Corriveau et al., 2009). Egyed and colleagues presented 18-month-olds with an object in a communicative versus a non-communicative context. They found that when addressed in an *ostensive* manner by smiling and making eye contact, toddlers were able to generalize interpretations of communication better than in a non-communicative context. Corriveau and Harris (2009) showed in a longitudinal study of attachment that securely attached children were more able to rely on their mother's claims on naming a particular object, whereas insecure children tended to rely more on the claims of a stranger. Both experiments measured ET by exploring how new information is processed and valued by the child and are not directly applicable to adults. Schröder-Pfeiffer and colleagues (2018) published a research protocol to study ET in adults in conditions of social stress in a provocative laboratory condition (Schröder-Pfeifer, Talia, Volkert & Taubner 2018).

Participants are asked about their performance in a simulated employment interview. Subsequently their ability to revise their opinion after feedback from an expert committee about their performance is studied.

However, this experimental approach may have some limitations. First, the capacity to elicit ET experimentally in a laboratory simulation depends on the capability of the procedure to trigger different epistemic states. Epistemic states are especially triggered in a specific relational attachment context. It is debatable if such a context can be simulated sufficiently in a laboratory situation like an employment interview. Second, *ability* measurements of ET are rather complex and lengthily, which demand considerable time from both patients as therapists and are therefore arduously clinically applicable.

In addition to ability tasks, a more clinically feasible way to assess ET would be to rely upon patients self-report, by designing questionnaires that represent clinical features of ET. However, ET is still a relatively new, theoretical and abstract concept and the exact clinical features of ET are not defined in a way that makes them easily accessible for self-report. Hence, first consensus is needed on the definition and clinical features of ET to be able to measure it. We consequently conducted a Delphi study to reach consensus on the definition of epistemic trust and its characteristics. The Delphi method is a consensus-building technique using expert opinion to formulate a shared framework for understanding a topic or theoretical concept with limited empirical support. (Boulkedid, Abdoul, Loustau, Sibony, & Alberti, 2011; Linstone & Turoff, 1975).

In this paper we define epistemic trust by describing its core domains based on consensus of expert opinion on the concept. Based on this, we aim to develop items for a new self-report questionnaire to assess ET.

Methods

Study Design

In the current study, the Delphi method was used to survey expert opinion and gain systematic consensus on the definition and clinical features of Epistemic Trust (ET) and Epistemic Mistrust (EM). The Delphi method is a systematic way to gather information from an expert panel and consists of a series of sequential rounds or questionnaires, followed by controlled, anonymous feedback (Linstone & Turoff, 1975; Powell, 2003). After the feedback, each expert panel member can choose whether to change his or her opinion in the next round or maintain their original ratings. Several rounds may be required, depending on the desired level of consensus (Langlands, Jorm, Kelly, & Kitchener, 2007). The Delphi method has been proven to be especially useful to address topics involving a lack of empirical data (Delbecq, Van de Ven, & Gustafson, 1975; Powell, 2003; Wollersheim et al., 2009), which makes it particularly suitable to obtain more substantiation to the still new and relatively unexplored concept of ET. The current Delphi study consisted of two rounds which were presented to the experts via an online survey tool (http://www.surveymonkey.com) and an additional third round based on feedback given by one expert in the second round.

Procedure

A provisional definition of ET was proposed by the authors, based upon the available literature (see appendix Definition). This definition consisted of seven sections and was subsequently submitted in a number of surveys to an international group of experts.

Experts were mailed a link for each round, enabling them to rate each of the seven sections of the pre-defined definition of ET separately. They were asked to indicate to what

degree they felt that each section was valuable as part of the definition of ET. Given the lack of empirical evidence on the definition of ET, experts were stimulated to give feedback in terms of additions and rephrasing of the sections. These additions were taken into account and sections would be revised when useful feedback was given. In order to carefully judge if additions and revisions caused qualitative improvements, revised sections would also be presented to the experts again for reconsideration, even when consensus was already reached. After each round, individual and group results were mailed to the experts. When consensus for inclusion of a section was not reached, and/or when the sections were adjusted based on the feedback of the experts, the sections were presented to the experts again in the next round.

Selection of experts

To support the process of the selection of the experts, an intermediary was asked to participate. Professor Peter Fonagy (P.F.) was asked for this role, as he is one of the founders of the theory on ET. The Delphi experts were all clinically and/or scientifically active in the field of personality disorders, mentalization and ET. Selection criteria were: 1) At least 5 years of clinical experience with treatment and / or assessment of people with a personality disorder (i.e. psychologist, psychiatrist, and social psychiatric nurse), and/or 2) At least 5 years of experience in the field of research into or education about personality disorders (e.g. author of scientific articles, lecturer at the university).

These criteria have been drawn up based on criteria from other Delphi studies (Legra, Verhey, & Van Alphen, 2017; Van Alphen et al., 2012) and in consultation with the intermediary. Experts were recruited from the professional network of the intermediary.

This yielded a multidisciplinary expert panel (see figure 1. for flowchart). Characteristics can be found in Table 1. A total of seven experts completed all three Delphi rounds.
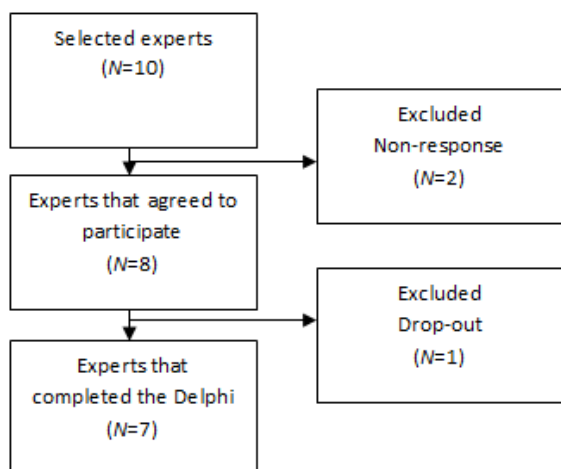

Figure 1. Flowchart of participants in the expert panel.

Table 1

Characteristics of the Delphi experts (N = 7)

Female gender, %	28.6
Age, mean number of years (SD, range)	53.6 (13.9, 39-73)
Country of residence, %	
UK	42.9
US	42.9
Switzerland	14.3
Current profession, %[1]	
Psychiatrist	28.6
Psychologist	57.1
Researcher	28.6

Professional experience, mean number of years (SD, range)	25.6 (15.8, 5-45)

[1]Multiple answers possible

SD = standard deviation

Data analysis

Data were analysed in Microsoft Excel using mean, standard deviation and median formulas to calculate consensus for each section of the definition. In accordance with the study by van Alphen et al. (2012), the average score served as a measure of the level of agreement (Sharkey & Sharples, 2001). We determined that agreement was reached when at least two-thirds of the respondents (≥67%) "agreed" or "fully agreed". Responses from the Likert scale were labelled to reflect strong disagreement (6) and strong agreement (1) the scores in between (2-5) were not labelled. Scores of '5'and '6' were together categorized as agreement (indicating the response of "agree" or "strongly agree" on the section). The following cut-off points were used for inclusion of the sections in the definition:

- 66.6% - 100% scoring a '5' or '6': high agreement, the section was included in the definition;

- 50.0% - 66.5% scoring a '5' or '6': moderate agreement, experts were asked to rerate the section;

- 0.0% - 49.9% scoring a '5' or '6': low/no agreement, the section was excluded from the definition

Definition

The definition of ET was developed by the authors based on the available literature on ET and the clinical view on the subject of the research team.

To be able to assess ET in order to predict specific outcomes before entering treatment, it becomes necessary to define the more stable clinical features of ET. With this in mind, we choose to specifically focus on a trait-like definition of ET as an adaptive predisposition characterized by a tendency to perceive, think, feel and behave in a certain way in specific situations. The definition therefore was formulated in accordance with the characteristics of a personality trait, as described in the Diagnostic and statistical manual of mental disorders, Fifth edition (DSM-5, American Psychiatric Association, 2013). In the DSM-5, it reads that "A personality trait is a tendency to feel, to perceive, to behave and to think in a relatively similar way through time and in various situations in which this personality trait manifests itself" (p. 1020). Our definition of ET was divided into seven sections: 1) General Definition, 2) Expression of ET, 3) Continuum ET-EM, 4) Expression of EM, 5) Context, 6) Ontogenetic, and 7) Effect of Epistemic Trust/Mistrust. For the full definition, see appendix A.

Results

In the first round, consensus was reached on six of the seven sections of the definition of ET, meaning that on these sections, more than 66.6% of the experts scored a '5' or '6', indicating medium and strong agreement on the inclusion of the fragment as part of the definition of ET. Total agreement rates ranged from 43% to 86%. In addition, substantial feedback was given both textually and on the content of the definition. In table 2, the values marked with an asterisk (∗) met the criterion of ≥ 66.6% agreement.

Table 2

Results for the agreement of the following sections as part of the definition of epistemic trust/mistrust in round 1 (N=7)

Definition Epistemic Trust[1]	Range	Median	Mean	SD	Distributions of ratings (%)[2]		
					1-2	3-4	5-6
1. General Definition	3-6	6	5.3	1.11	-	14.3	85.7*
2. Expression Epistemic Trust	3-6	5	4.9	1.07	-	28.6	71.4*
3. Continuum	4-6	5	5.0	0.82	-	28.6	71.4*
4. Expression Epistemic Mistrust	2-6	6	5.0	1.53	14.3	14.3	71.4*
5. Context	4-6	5	5.3	0.76	-	14.3	85.7*
6. Ontogenetic	3-6	3	4.1	1.46	-	57.1	42.9
7. Effect Epistemic Trust/Mistrust	4-6	5	5.0	0.82	-	28.6	71.4*

[1] For full definition, see Appendix A.

[2] Distributions of ratings (%) of the tertiles 1-2, 3-4 and 5-6 along the 6-point rating-scale.

In response to the feedback the experts provided, several sections were revised, and suggested additions were taken into account (see Appendix B). One section with low agreement (42.9%) was deleted from the definition. Although consensus was reached for all other sections, five of the remaining six sections were again presented to the experts in the second round, since considerable textual revisions were made. This resulted again in

sufficient consensus on all these sections, where agreement was higher (sections 1 and 2) or equal (sections 3, 4 and 7) to the first round, as can be seen in table 3.

In the second round one of the experts drew our attention to a possible ambiguity of the original definition. Since this feedback related to relevant conceptual aspects of the definition, we decided to carry out a small adjustment to the original definition and conduct an additional third round where 85,7% of the experts agreed with the proposed refinement of one aspect of the definition.

Table 3

Results for the agreement of the following sections as part of the definition of epistemic trust/mistrust in round 2 (N=7)

Definition Epistemic Trust[1]	Range	Median	Mean	SD	Distributions of ratings (%)[2]		
					1-2	3-4	5-6
1. General Definition	5-6	5	5.4	0.53	-	-	100*
2. Expression Epistemic Trust	3-6	5	5.1	1.07	-	14.3	85.7*
3. Continuum	3-6	5	5.0	1.15	-	28.6	71.4*
4. Expression Epistemic Mistrust	3-6	5	5.0	1.15	-	28.6	71.4*
7. Effect Epistemic Trust/Mistrust	4-6	5	5.1	0.90	-	28.6	71.4*

[1] For full definition, see Appendix B.

[2] Distributions of ratings (%) of the tertiles 1-2, 3-4 and 5-6 along the 6-point rating-scale.

Definition Epistemic Trust based on expert consensus

The definition we reached consensus on is the following:

1. Epistemic trust refers to the predisposition of a person to accept and trust that the information of other persons is authentic, trustworthy, generalizable and relevant to the self.

2. This predisposition is characterized by a certain tendency to perceive, think, feel and behave in a certain way in specific situations, especially in situations where the attachment system is activated, and will express itself in

a) Sensitivity to ostensive cues and appropriate perceptions and interpretations of the intentions of others as being trustworthy in enabling the transmission of social information,

b) basic cognitions about other people as being genuinely competent and trustworthy,

c) basic affects of safety, curiosity to information and trust in social interactions,

d) behaviour expressing collaboration and openness to the information and expertise of others,

3. This predisposition can be understood as a bipolar continuum. It may range between

1. Maladaptive expressions of being overly trustful and open to social information, to

2. Adaptive expressions of balancing trust and appropriate alertness/vigilance with regard to potential misinformation, to

3. a tendency to misinterpret intentions of others as being malevolent and therefore their social information as being irrelevant.

In general, "Epistemically Healthy" individuals will be able to adaptively reposition themselves on the continuum in response to the social environment and behaviours of others.

4. Epistemic mistrust therefore will be expressed generally in

a) a tendency to misinterpret social information (e.g. ostensive cues) of others as being malevolent, irrelevant and/or not generalizable to their own situation,

b) basic cognitions about others as being unreliable and potentially harmful,

c) basic (interpersonal) affects of feeling unsafe and fearful in interpersonal contacts and new social situations,

d) behaviour that interferes with appropriate collaboration, for example as expressed in a defensive and hostile interpersonal stance, or in a "blank" indifferent stance.

These expressions are especially evident in situations where the attachment system is activated

5. This predisposition (epistemic trust – mistrust) will especially be activated in interpersonal contexts where the attachment system is activated and in which information is delivered. It therefore may predict to what extend someone will accept social information from others, and may thus enable -or interfere with opportunities of persons -to learn socially from other people.

6. Being sufficiently epistemic trustful enables a person to benefit from knowledge transmitted through interpersonal contact to improve personal and flexible adaptation. Epistemic mistrust on the other hand may interfere with accepting and trusting knowledge

from others, preventing change to occur. Therefore, epistemic mistrust may interfere with

any (professional) relationship, in which help is offered through transmitting knowledge in a

social context.

Discussion

The theory of epistemic trust (ET) may have the potential to predict outcome of

social interventions, but there is still very little empirical evidence for this theory. In order to

make the concept of ET accessible to a clinically feasible assessment, consensus is needed

about its definition and clinical features. We therefore conducted a Delphi study to gain

consensus on the definition of ET. An international panel of experts on the subject was

asked to participate and ultimately consensus was yielded on six of the seven topics

concerning ET or epistemic mistrust (EM). The response rate was high and there was a high

level of agreement across experts, complete consensus was reached after only two survey

rounds. An additional third round was conducted after feedback in the second round by one

of our experts about a potential misunderstanding of ET as a static and biologically based

personality trait.

To our knowledge this was the first Delphi study focusing on epistemic trust and

mistrust. Conducting a Delphi study requires availability of a group of busy professionals

who donate their time, attention and repeated thoughtful responses. Given the amount of

time and effort to complete the surveys, it was remarkable that 7 out of 8 experts

completed all surveys and there was no attrition of participants. In addition, the swift reach

of agreement on most (six out of seven topics) aspects of the definition demonstrates a

strong consensus between experts on the definition and clinical features of epistemic trust

and mistrust and its significance to the understanding of personality disorders. Interestingly,

there was disagreement between experts on the section on ontogenesis of ET. Probably, this reflects the lack of consensus in the field on the aetiology of personality disorders in general.

Although we reached sufficient consensus after the second round, we choose to conduct an additional third round, because the feedback of one of our experts in the second round related to a relevant conceptual discussion about ET as a stable personality trait. In our definition of ET, we focused on the relatively stable clinical features of ET to be able to measure ET to predict outcome before entering treatment. We therefore choose to define ET as a *disposition that will express itself in (perception, cognition, affect and behaviour)'* in the original definition. Feedback was raised and supported by other experts that this definition might convey the impression that ET is a static and biologically determined personality *trait*. It relates to an interesting issue that we tried to clarify in our reformulated definition in the third round, namely what aspects of ET can be considered as stable and what aspects are changeable throughout time and context. A conceptually similar discussion may be seen in attachment literature, where there has been a paradigm shift from attachment as a relatively stable personality trait towards a more dynamic understanding of attachment, where the activation of insecure internal working models are dependable on specific (unsafe) aspects of the relational context (Kobac & Bosmans 2018). The idea here is that although attachment style may be largely stable and as such predictive of actual relational style, specific attachments states may still be changeable and (partly) also depend on the specific attachment person involved in the dyad. We believe ET might be conceptually similar: although ET has features that are rather stable over time, the emergence of these features also depends on the actual relational context within a specific (therapeutic) encounter, determining if trust is evoked or not. In consideration of this, we

choose to refine our original definition by defining ET as *a trait-like disposition.* Since, once ET is established, it becomes a rather stable personality feature, defining the openness of a person to learn from his/her social environment. If ET acts like a trait, this means it is an inclination to feel, observe, behave and think in a relatively similar manner over time and in various situations where this personality trait becomes manifest (DSM5). In one additional third round, 85,7% of the experts agreed with this refinement.

A strength of this study was the suggestion of the experts by one of the founders of the theory of ET, Professor Peter Fonagy, although there were a limited number of experts (7) and all experts had backgrounds in attachment and mentalizing theory. Other frames of reference in background were not represented. Because of practical issues involving a panel of geographically separated experts, we chose to communicate by e-mail and an online survey program, which may have sacrificed an opportunity for more active and personal engagement in this effort. Still the Delphi methodology offers a practical and cost-effective approach to this problem. Delphi research relies on level III evidence, though it is recognized as an excellent starting point for further scientific inquiry (Wollersheim et al., 2009). Agreement was taken to mean that at least two-thirds of the experts (> 66, 6%) 'agree' or 'strongly agree' with a part of the definition. The literature consensus range for Delphi studies is between 50 and 100% (van de Bruggen, 2002). The choice of a two-thirds majority was because of the novelty of the concept of ET and lack of extensive research tradition on ET.

The purpose of this study was to reach consensus on the definition of ET in order to allow the design of a tool to measure ET. This tool could be used as a *psychomarker* to predict who may benefit from psychosocial interventions and who may need adaptations to the treatment, e.g. selecting highly specialized treatments, which take into account

epistemic hypervigilance from the start. The potential predictive value of ET may not only be

limited to mental health treatment, but to *any* social intervention that depends on trust in

others. We will therefore conduct a subsequent Delphi study on the design of a

questionnaire to be able to measure ET at the start of any treatment.

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Appendix A

Constructed definition of epistemic trust and epistemic mistrust, constructed based on

researchers' interpretation of the available theory and clinical viewpoint, round 1.

1. General Definition. Epistemic trust refers to the disposition of a person to accept and

trust that the information of other persons is authentic, trustworthy, generalizable and

relevant to the self.

2. Expression Epistemic Trust. This disposition will express itself in: 1) appropriate

perceptions and interpretations of the intentions of others as being trustworthy, enabling

the transmission of trustworthy information; 2) basic cognitions about other people as being

genuinely interested and as being generally trustworthy; 3) basic affects of safeness and

trust in social interactions, and 4) behaviour expressing collaboration and openness to the

information and expertise of others.

3. Continuum. This disposition can be understood as a bipolar continuum, ranging from

maladaptive expressions of being overly trustful and open to social information over

adaptive expressions of balancing trust and appropriate alertness/vigilance with regard to

potential misinformation to maladaptive expressions of deep mistrust in other people's

intensions and information.

4. Expression Epistemic Mistrust. Epistemic mistrust therefore will be expressed generally

in: 1) a tendency to misinterpret intentions of others as being malevolent; 2) basic

cognitions about others as being unreliable and potentially harmful; 3) basic (interpersonal)

affects of feeling unsafe and fearful in interpersonal contacts, and 4) behaviour that

interferes with appropriate collaboration, for example as expressed in a defensive and

hostile interpersonal stance.

5. <u>Context.</u> This disposition (epistemic trust – mistrust) will be activated in interpersonal contexts in which information is delivered and may enable or interfere with opportunities of persons to learn socially from other people.

6. <u>Ontogenetic.</u> Ontogenetically, the development of this disposition will be largely determined by the experienced safety in early attachment relationships with caregivers and as such these experiences may dispose a person to generally (mis)trust others as potential and reliable sources of information. Once established, epistemic (mis)trust behaves as a rather stable personality trait, which may be activated in interpersonal contact when ostensive cues sign the potential delivery of social information.

7. <u>Effect Epistemic Trust/Mistrust.</u> Being sufficiently epistemic trustful enables a person to benefit from knowledge transmitted through interpersonal contact to improve personal and flexible adaptation. Epistemic mistrust on the other hand may interfere with accepting and trusting knowledge from others, preventing change to occur. Therefore, epistemic mistrust may interfere with any professional relationship, in which help is offered through transmitting knowledge in a social context.

Appendix B

Revised definition of epistemic trust and epistemic mistrust based on feedback and addition

of experts, round 2 (revisions and additions in *cursive*).

1. General definition. Epistemic trust refers to the disposition of a person to accept and trust

that the information of other persons is authentic, trustworthy, generalizable and relevant

to the self.

2. Expression Epistemic Trust.

This disposition will express itself in

   1) *Sensitivity to ostensive cues and* appropriate perceptions and interpretations of the

   intentions of others as being trustworthy *in* enabling the transmission of *social*

   information,

   2) basic cognitions about other people as being genuinely *competent* and trustworthy,

   3) *basic affects of safety, curiosity to information* and trust in social interactions,

   4) behaviour expressing collaboration and openness to the information and expertise

   of others.

3. Continuum. This *trait-like* disposition can be understood as a bipolar continuum. *It may*

range between

   - maladaptive expressions of being overly trustful and open to social information, to

   - adaptive expressions of balancing trust and appropriate alertness/vigilance with

   regard to potential misinformation, to

   - *a tendency to misinterpret intentions of others as being malevolent and therefore*

   their social information as being irrelevant.

In general, "Epistemically Healthy" individuals will be able to adaptively reposition themselves on the continuum in response to the social environment and behaviours of others.

4. Expression Epistemic Mistrust. Epistemic mistrust therefore will be expressed generally in

1) a tendency to misinterpret *social information (e.g. ostensive cues) of* others as being malevolent, *irrelevant and/or not generalizable to their own situation,*

2) basic cognitions about others as being unreliable and potentially harmful,

3) basic (interpersonal) affects of feeling unsafe and fearful in interpersonal contacts *and new social situations,*

4) behaviour that interferes with appropriate collaboration, for example as expressed in a defensive and hostile interpersonal stance, *or in a "blank" indifferent stance.*

5. Context. This disposition (epistemic trust – mistrust) will be activated in interpersonal contexts in which information is delivered and may enable or interfere with opportunities of persons to learn socially from other people.

6. Ontogenetic (*DELETED*).

7. Effect Epistemic Trust/Mistrust. Being sufficiently epistemic trustful enables a person to benefit from knowledge transmitted through interpersonal contact to improve personal and flexible adaptation. Epistemic mistrust on the other hand may interfere with accepting and trusting knowledge from others, preventing change to occur. Therefore, epistemic mistrust may interfere with any *(*professional*)* relationship, in which help is offered through transmitting knowledge in a social context.