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5	Corresponding Author	Family Name	Gerdes
6		Particle	
7		Given Name	Anne
8		Suffix	
9		Organization	University of Southern Denmark
10		Division	Institute of Business Communication and Information Science
11		Address	Engstien 1, Kolding 6000, Denmark
12		e-mail	gerdes@sitkom.sdu.dk
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Revealing preconditions for trustful collaboration in CSCL

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Anne Gerdes

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Abstract This paper analyses preconditions for trust in virtual learning environments. The concept of trust is discussed with reference to cases reporting trust in cyberspace and through a philosophical clarification holding that trust in the form of self-surrender is a common characteristic of all human co-existence. In virtual learning environments, self-surrender might fail, due to a setting that affords strategic communication and impression management. To obtain the kind of unconditional commitment necessary for learning, one might benefit from the insights from open-source communities, in which self-articulation of goals and volunteerism promote productivity. Balancing free will in connection with study initiatives with inquiry teaching methods might encourage a practice which favours mastery-oriented learning strategies and the seeking of knowledge for its own sake.

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Keywords Trustful collaboration · Learning strategies · Self-surrender · Reflection

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Introduction

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In what follows, I outline a *pro et con* discussion of trust in cyberspace. Next, I turn to a moral philosophical interpretation of trust in order to clarify the manifestations of ways in which trustful relations are spelled out in both real life as well as in cyberspace. From this point, I investigate obstacles related to the unfolding of trust in connection with learning in virtual environments. Here it is often held that activity by itself is a token that learning has taken place. Nevertheless, one might question if it is possible to judge whether learning has taken place through engaged communication, or whether we have just witnessed online impression management among participants not risking to lay themselves open to trust others? Finally, I ask whether we can import insights from open-source collaboration to an educational setting. In answering that question, I argue for the importance of volunteerism

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A. Gerdes (✉)Institute of Business Communication and Information Science, University of Southern Denmark,
Engstien 1, 6000 Kolding, Denmark
e-mail: gerdes@sitkom.sdu.dk

and self-articulation of goals in order to establish the kind of trustful relations among participants that may encourage collaboration and learning.

Trust in virtual space

It is generally acknowledged that trust plays an important role for the flourishing of collaborative relations in real life as well as in cyberspace. For instance, Jarvenpaa and Leidner (1999) report findings from a case study regarding the importance of establishing trustful communication in global virtual teams in which students collaborated on creating websites. They reveal how a low degree of trust among team members had a negative effect on the outcome, as well as on the ability of group members to cope with problems during the project period. Contrariwise, groups that from the outset could be characterized by a high degree of trust, or were able to develop trustful relations during the project period, successfully carried out the project by acting proactively in a task-promoting manner. In explaining these findings, Jarvenpaa and Leidner point to the importance of both responding and initiating behaviours, as well as acts of explicitly communicating commitment, excitement, and optimism. In a similar vein, the importance of facilitating collaboration through role division has been paid great attention to within the field of computer-supported collaborative learning. By introducing a framework with a clear role division for online communication among learners, misunderstandings, isolation, and expectations of ill will can be reduced (Dillenbourg 1999; Kling and Courtright 2004).

Furthermore, Jarvenpaa and Leidner note that trustful relations may be imported in the beginning of a project period as “swift trust,” whereby pre-expectations may kick start the collaboration, but still, trustful relations are established through the communication behaviour outlined in the first few keystrokes. Likewise, in analysing the preconditions for virtual trust in broader online settings than just learning settings, de Laat argues that:

As a rule a lack of trust is due to remain between pure virtuals. This lack can only be bridged by assuming (not inferring) trustworthiness, and take to trusting action from the outset of a project. A hyperactive style of action, which involves taking due initiatives and responding swiftly to initiatives from others, seems indicated. This approach is not due to backfire, while to many of those involved there simply may seem to be no alternative: either hyperaction, or none at all. (de Laat 2005, p. 179)

In his article, de Laat concludes that virtual trust is possible by using the theoretical framework developed by Pettit in order to disclaim virtual trust (Pettit 2004). A closer look into the concept of trust as explained by Pettit reveals a categorisation of two forms of trust, “primary” and “secondary,” with reliance as a common genus. Pettit points to a distinction between “trust” and “reliance,” holding that to rely on others can be viewed as a rational activity, in which we show confidence in persons (or things) by relying on the fact that they constitute a relevant type, or are inclined to act in a relevant way under some given circumstances. Ordinary reliance differs from trust by being interactively static. For instance, I rely on drivers to respect rules when driving, and I rely on the bridge that I am crossing (Pettit 2004, p. 1099). Such acts of rational reliance do not count as trust, because trusting someone implies treating him or her trustworthily, which in turn, involves a dynamic relation between a trustor and a trustee, in which the trustor lays him or herself open to the trustee. Thereby, the trustor treats the trustee as trustworthy in a way that makes it clear to the trustee that the trustor is relying on the trustee. Moreover, the trustor must be manifesting the belief that the action of treating the trustee as trustworthy will increase the

trustee's reason to act as the trustor relies on him or her to do (Pettit 2004, p. 111). This kind of reliance is termed primary trust, and it rests on the belief that you may regard others as trustworthy, in the sense of being antecedently disposed to respond to certain manifestations of reliance, simply because they are loyal friends or family, or because of evidence that they are kind and virtuous people, who will not let anyone down. Pettit then goes on to define secondary trust as the kind of trusting relation in which the trustor relies on the trustee proving reliable because he is disposed to becoming disposed (a meta-disposition) to respond in a helping manner. This kind of secondary trust stems from the trustee's desire for esteem. In this sense, the trustor assumes the trustee to be trust-responsive, and he or she might invest trust in the trustee, not because he or she is seen as trustworthy, but because one may assume that the trustee is attracted to the esteem of others (Pettit 2004, p. 113).

Pettit holds that primary and secondary trust is not possible in cyberspace. When it comes to primary trust, I cannot actually develop beliefs about an Internet contact as being loyal and virtuous. I lack evidence of bodily presence as well as evidence of interpersonal interaction in a context involving people, whom I already credit. Finally, I lack evidence of the virtual's long-term behaviour toward me, since I am unable to form a stable idea about the virtual's performance over time—*on the Internet (...), we all wear the ring of Gyges* (Pettit 2005, p. 118). For the same reasons, when it comes to secondary trust, I am unable to establish rational beliefs about an Internet contact as being esteem seeking and trust responsive. Virtual presence prohibits actors from forming the beliefs necessary for fertilizing primary trust, implying that the trustor cannot seriously form beliefs about the trustee to be virtuous or loyal. Therefore, the trustee is in a position in which esteem-seeking behaviour cannot be backed up by reasons for seeking it in the first place, because everybody knows that we are all “spectral presences” to each other.

As mentioned earlier, de Laat turns the argument upside down in arguing that individuals are, in fact, able to place trust in Internet contacts (de Laat 2005). The unfolding of both primary and secondary trust in cyberspace does take place in, for instance, virtual task groups, eBay, Facebook, discussion boards, and chat rooms. Here, trust can be built upon social cues (style of communication and small talk reveal to others whether one is being seen as helpful or kind), online reputation rating systems, and third parties' mediation in connection to virtual trading communities (such as certified escrow companies). Actually, we do take chances to invest trust in virtuals on the basis of the assumption that the other will respond adequately to our request. In fact, virtual presence might even promote relations of trust, as disembodiment allows us to focus more intensely on important aspects of a given interaction. Moreover, secondary trust seems to be the glue behind virtual interactions. When it comes to virtual markets, task groups, and online communities, reputation-building and esteem-seeking behaviour are essential in virtual space.

The common framework of de Laat and Pettit categorizes actions of trust without accounting for a basic mechanism of trust. In the following section, I, therefore, present a philosophical analysis of trust in order to clarify the concept. My analysis of trust will thereafter serve as a framework for explaining obstacles and possibilities in connection with building trust in virtual learning environments.

In a perspective of science, trust can be given a functionalistic description, in which trust is explained with reference to a cause—a typical approach would be biological or evolutionary reductionism, explaining trust as a function related to our instinct of self-preservation. A similar functionalistic account of trust is reflected in the work by sociologist Niklas Luhmann, who explains trust as a mechanism for the reduction of social complexity (Luhmann 1979). In what follows, I introduce a phenomenological description of trust,

resting on the assumption that our bodily based being in the world gives us an immediate
 experience of trust, which escapes a scientific cause-effect explanation. As such, trust is
 understood by us as a spontaneous embodied experience.

Trust: A philosophical clarification 132

In our striving after the good (or the bad), we are mutually dependent on each other—we
 live, so to speak, in a state of surrender to each other. This fundamental human condition,
 which we do not have the ability to transcend, forms the central point in the formulation of
 ethics by the theologian and philosopher, K. E. Løgstrup (1997). Moreover, with the
 definitive feature of speech being openness, trust is vital to every kind of communication.
 This basic communicative aspect of trust highlights the fact that: *“Regardless of how varied
 the communication between persons may be, it always involves the risk of one person
 daring to lay him or herself open to the other in the hope of a response. This is the essence
 of communication and it is the fundamental phenomenon of ethical life”* (Løgstrup 1997,
 p. 17). Through a phenomenologically based conception of trust, Løgstrup illustrates the
 mutual dependency between people, while at the same time pointing out that the other’s
 self-surrender to me equally demands that I am always unilaterally under an obligation to
 the person I meet. It is only I who can determine whether I will accept or reject the other, or,
 as Løgstrup expresses it: *“A person never has something to do with another person without
 also having some degree of control over him or her.”* (Løgstrup 1996, p. 25).

It is not a question here of a concept of trust which stands or falls with whether or not it
 is honoured. It is a matter of the simple form of trust expressed by the fact that we cannot
 avoid surrendering to each other. Regardless of whether we like each other or not, we
 cannot live without referring to each other and to the community. Trust lies, therefore, in the
 nature of that reference—and by extension self-surrender—as a common characteristic of
 all human co-existence. Despite the fact that in concrete historical contexts, trust can be
 realised under more or less favourable conditions, the self-surrendering is always the
 underlying factor. It is, then, not a question of the ethics of trust in a sentimental sense. The
 ethical demand is not a matter of care but represents a fundamental precondition of being
 human consisting of self-surrender. The importance of avoiding sentimentalizing the
 concept of trust cannot be exaggerated. In this respect, trust must be regarded as
 fundamental to such an extent that we would not be able to exist if co-existence were not
 supported by this fundamental mechanism of trust. This is made even more evident by the
 fact that we are most often surprised and demand an explanation, if we are met with
 rejection and mistrust—distrust is, so to speak, the deficient form of trust. This may also
 account for the notion of “swift trust” mentioned before, in referring to ways in which
 individuals import trust into cyberspace to build trustful relations.

According to Løgstrup, the ethical demand can only be honoured spontaneously. As
 soon as we begin to think about whether we are really acting as we ought, the focus moves
 to ourselves and away from the essence: to act exclusively in relation to the other person.
 From an ideal perspective, we do not act ethically in such situations and if the worst comes
 to the worst end up in self-justification. Even though co-existence rests on a basic
 assumption of trust, we surrender our existence by showing each other a conditional trust,
 which spares us from unbearable exposure. We are forced, so to speak, to trivialise the basic
 prerequisite of life by giving it a form, which makes existence bearable and practicable.
 Existence is given shape, then, by the conventional norms with which we surround
 ourselves in order to preserve a smooth and functional co-existence (Løgstrup 1997, p. 19).
 Norms are wedged in like a neutralizing instrument, which provides a space for action in

which we do not need to relate to the fundamental, radical alternatives of human existence every time we come into contact with one another—what is not unconditional care for the other's life is destruction of it. Løgstrup notes that it is the child who does not manage to bear the comfortable mantle of convention, but encounters the world with trust and without reservations—*"The child, being yet outside of convention, still stands in the power of the given alternative. If he or she fails to encounter love, his or her future possibilities are destroyed—as psychology and psychiatry have amply shown."* (Løgstrup 1997, p. 20).

We may, of course, learn and do learn the hard way to distrust others, but we do not have to learn to trust. As such, we can and do have reasons for distrust, but not for trust. Although we may have sufficient reason to distrust a given individual, we can never have sufficient reason to trust others, even though we may have good reasons for trusting somebody. When we reason and place trust in others, it involves genuine risk taking, and this kind of surrendering ourselves to the other—whether based on rational or intuitive reasons—cannot be accounted for by splitting it up into primary and secondary forms of trust. Even though we may be rational about investing trust in others, by relying on them to act trust-responsive for esteem-seeking reasons, we never do and can have sufficient reasons for trusting others. To phrase it the Aristotelian way (Aristotle 1909), trusting others with reason is to exhibit the virtue of courage, as opposed to cases of being overly suspicious or displaying great lack of caution, whereby one displays character traits of being a coward or being careless. In cyberspace, we impose relations of trust in the same manner as in real life, where it is characteristic that we encounter one another with natural trust—we have, indeed, no alternative to trusting others and by doing so, we lay ourselves open to them. If self-surrender, carried out in accordance with Internet norms, does not exist, communication would not be possible at all, and activity on the Internet would not flourish the way it does. This observation accounts for the empirical cases of trust in cyberspace as mentioned by de Laat. Of course, I may pretend to be somebody else in cyberspace and from that position carry out false communication. However, this is no different from real-life situations in which individuals run into a fraud. The reasoning that goes into placing trust in others involves risk-taking action, and if we have sufficient reasons for distrusting in cyberspace, and still do trust, one might say that we act carelessly. On the other hand, we may also find ourselves in a virtual context, which impedes self-surrender by promoting strategic communication and impression management. In what follows, I will elaborate further on this point by looking into preconditions for trust in virtual learning environments.

Obstacles for trust in virtual learning environments

The literature concerning online learning processes often discusses blended learning activities as a means to support collaboration among students (Kirschner et al. 2004; Salmon 2005; Sorensen 2002). Here focus is on the development of guidelines for nursing online activities, and one of the big challenges seems to be how to generate energetic activity in online sessions (Fontaine 2002). It is, in general, held that the asynchronous mode of communication allows students to reflect more deeply upon posts before answering them (Sherry 2000). The main challenge seems to be to make sure that activity does not fade out because students reply too slowly, or because the didactic framework for communication is not set up properly in the first place, leaving the participants with unclear roles and loose ideas about the purpose of a given activity. In conclusion, if we can observe a flow of lively online debate, including contributions with interesting issues raised, it is taken as a sign that reflective learning processes and knowledge construction have taken place.

Despite such didactic considerations, online learning activities to a certain degree subject their surroundings to standardisation, self-monitoring, and surveillance (Land and Bayne 2005). When technology affords moves toward surveillance, identity moves toward being a question of how you are able to represent yourself in the virtual realm. Therefore, efforts going into the articulation of a proper net identity with the purpose of minimizing risk and exposure may overshadow engaged involvement in online collaboration. If this is the case, learners end up participating in standard collaboration. The unpredictability and the disquietude in online communication, which sometimes turn learners into vulnerable children (although with less dramatic effects than reported by Løgstrup), can, to a certain degree, be handled by introducing rules of communication. Still, acting in virtual learning environments requires a relative broad sense of awareness and self-monitoring. Here, what you might call deliberated self-surrender could be a suitable way to respond to a design that offers you an opportunity to communicate and present yourself after always having reflected upon how to stage your communication. Such mechanisms of communication are well known from face-to-face situations as well (Goffman 1959). However, here learners often participate in the negotiation of meaning through communication that is not reified, whereas online communication is often subject to reification, and accessible in logs. In the ideal sense, logs give rise to meta-reflections regarding learning processes (Fontaine 2002), but at the same time, logs afford surveillance both between learners as well as between learners and teacher. Furthermore, the teacher traditionally possesses a role which reflects an asymmetric relation of power between being a facilitator of communication and at the same time representing a formal authority with a duty to evaluate students' performance. This paradox is further reinforced in a virtual setting, because in most learning environments there are sophisticated surveillance tools available for tracking student activity (Land and Bayne 2005). This might gradually push the role of teaching toward one of learning management instead of one of facilitating communication. These circumstances might promote a competitive setting on behalf of a collaborative setting, and thereby negatively influence the ethos of teaching.

Although concerned with the potential problem of surveillance, researchers and teachers as well as students often cherish logs in discussion boards as facilitating tools for scaffolding reflection and ongoing discussions during a semester. Nevertheless, it becomes relevant to raise the issue, whether there is a built-in tension between espoused theories that a didactic design is based on and theories-in-use in connection with e-tivities? How can we be sure that participation in such e-tivities constitutes evidence of reflection rather than of impression management? There might be a risk that learning environments actually strengthen and endorse the kind of communication in which learners are eager to perform rather than to be involved in engaged collaboration. In addition, because learners reflect upon how to arrange their communication, the involved risk taking is based on calculated statements. Consequently, learners are detached from these kinds of arguments because they have invested time in shaping them the smart way, so if anything goes wrong they may blame it on their online style of communication rather than on genuinely felt reflections that they have tried their best to formulate and share with others. Here, performance-oriented learning strategies overrule mastery-oriented strategies, leaving little room for contemplative reasoning. Thereby, the practice that unfolds itself actually nurses and reinforces strategic communication—bearing Aristotle in mind; if the good man carries out good actions, then what does the performance-oriented learner learn? Which standards of excellence does he or she strive to achieve?

A simple solution would be to get rid of logs in learning systems. Without reifications, learners might feel less exposed, because a post would be deleted shortly after a given

session or activity. However, this does not change the fact that we might still be witnessing the unfolding of strategic communication, because, in dealing with asynchronous communication, written statements would have to be present for others to reflect upon during a given period of time. Besides, many universities have invested in standard learning management systems with built-in log and surveillance facilities, and teachers are required to use these platforms.

Because computer-mediated communication implies greater uncertainty than face-to-face communication (for instance, in asynchronous communication, learners do not have immediate access to the reaction of others and lack of response can be given worst-case interpretations), the flourishing of trustful relations between learners in virtual environments is an important precondition. Risking lying oneself open is necessary to foster the kind of engagement among learners that provide for reflection and insight. As such, trustful communication implies that questions are asked openly, because they are worth asking (denoted “Fraglichkeit” by Gadamer in *Truth and Method*, 1993), not due to pedagogical purposes (where the person asking knows the answer), or due to rhetorical purposes. One of the main points in Plato’s Socrates dialogues is the distinction between proper and rhetorical communication. Here, asking questions is harder than answering them. To ask a question presupposes both openness and constraints, and, therefore, the person asking has to be able to navigate within a suitable horizon of asking. Furthermore, in order to ask, one must have a wish to get insight, implying that one must know that one does not know—the famous Socratic *docta ignorantia* (Platon 1991). Presenting a question is an invitation to others to involve themselves in a given subject matter and in the person asking the question. In this sense, answering becomes an act of commitment in which the person answering is willing to take the risk of interpreting and dealing with the question as well as the person behind. Therefore, the precondition for being able to establish collaboration and opportunity for profound reflection depends on the degree to which we are in a position to create space for the kind of openness in which learners dare risk exposing themselves to others. In what follows, I will look for inspiration in open-source communities, because here we see examples of trust-building activities among peers in order to pursue creative goals.

The quest for volunteerism and self articulation of goals

Benkler and Nissenbaum (2006) report findings from collaboration among large groups on the Internet, which effectively coordinate a joint enterprise, such as open-source software development, the Wikipedia project, and research tasks in which ordinary people relieve researchers by volunteering to carry out standard tasks—for instance, the NASA Clickworker experiment to map Mars’s craters (Benkler and Nissenbaum 2006, p. 397). This kind of online peer production grants people an opportunity to engage in practices which promote virtuous actions and engagement that further provide for additional virtuous character formation. Volunteerism and self-articulation of goals seem to be important preconditions for forming productive environments where people are motivated and able to carry out tasks that require trustful collaboration due to the call for open-minded reflection. Hence, potentials for affording a mastery-oriented learning strategy are present, and the development of such communities constitutes an alternative to the established managerial and contract-based production surrounding activities in both education and work life, and offers instead an opportunity for self-decision in carrying out tasks. Independence of institutional rules and roles implies that self-motivation and commitment from the very beginning goes into the formation of collaboration and production. Consequently, the fact that individuals are exercising free will to a great extent allows for the kind of engagement

necessary for risk-taking actions, in which individuals dare to lay themselves open to others. When considering didactic online learning strategies, one could benefit from these insights in order to reinforce the quest for free-spirited learning and contemplative reasoning in higher educational settings (Levey 2007). A first simple step toward obtaining this goal would be to introduce broader options for self-selection of study subjects combined with peer production and inquiry teaching methods, in which teacher and students work together in research mode, in which students are met with troublesome knowledge and intellectual uncertainty. Thereby, students are being removed from their comfort zones and taken into strange places.

The student is perforce required to venture into new places, strange places, anxiety-provoking places. This is part of the point of higher education. If there was no anxiety, it is difficult to believe that we could be in the presence of a higher education. (Barnett 2007, p. 147)

Working in an inquiry-based way may help to produce graduates who are ethically and socially aware and able to reflect about the outcomes of their actions in a broader perspective. In this way, teachers would not only serve as teachers but also as role models for the adoption of a tradition which values a mastery-oriented behaviour toward learning. This suggestion may seem to be vague, but one should not underestimate the significance of role models, who, through enacted narratives, move students toward the best of academic tradition.

I can only answer the question ‘What am I to do?’ if I can answer the prior question ‘Of what story or stories do I find myself a part?’ We enter human society, that is, with one or more imputed characters—roles into which we have been drafted—and we have to learn what they are in order to be able to understand how others respond to us and how our responses to them are apt to be construed (..) Hence, there is no way to give us an understanding of any society, including our own, except through the stock of stories which constitute its initial dramatic resources. Mythology, in its original sense, is at the heart of things. Vico was right and so was Joyce. And so too of course is that moral tradition from heroic society to its medieval heirs according to which the telling of stories has a key part in education us into the virtues. (MacIntyre 1999, p. 216)

Concluding remarks

Trust is a basic prerequisite for knowledge to flourish. In virtual learning environments, self-surrender might fail, due to a setting that affords strategic communication and impression management, which again hampers involvement in a given topic or task. It is in carrying out risk-taking actions that one experiences the kind of unconditional commitment necessary for learning to take place. To obtain this in online learning settings, we might benefit from the insights from open-source communities, in which self-articulation of goals and volunteerism promote productivity. Balancing free-spirited student initiatives with inquiry-teaching methods, led by teachers serving as role models, might create room for virtuous character formation in support of a practice, which favours contemplative reasoning, and the seeking of knowledge for its own sake.

Higher education will either understand that the life of the mind is something to be cherished for its own sake, that learning can exist and flourish only if it is done for its own sake, or it will wither away and die. (Arendt 1973, p. 12)

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