Using Conversation Analysis to Understand How Agreements, Personal Experiences, and Cognition Verbs Function in Online Discussions

Trena M. Paulus, East Tennessee State University
Amber N. Warren, University of Nevada, Reno
Jessica N. Lester, Indiana University - Bloomington

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TRENA M. PAULUS  
University of Georgia

AMBER N. WARREN  
University of Nevada, Reno

JESSICA N. LESTER  
Indiana University

Abstract

In this conceptual paper, we propose that insights from conversation analysis (CA) may provide a useful approach for scholars interested in online learning by focusing first on how learners themselves orient to performing social actions online. We further propose that gaining a better understanding of what conversational moves are actually doing in online discussion can help researchers and educators better assess the learning that takes place there. Through worked examples, we demonstrate the ways that three conversational features (agreements, personal experiences and stories, and cognition verbs) tend to function in online institutional talk. We illustrate how these conversational features can accomplish a variety of actions in online academic discussions, including social affiliation, displaying expertise, and distancing oneself from claims. Recognizing how these features are interactionally deployed can help scholars better understand the functions of learners' talk. CA is a practical methodology for educators who may be reluctant to impose interactional frameworks on student discussions for learning.

Introduction

As social media and other new communication technologies are integrated into teaching and learning environments, educators and researchers continue to be interested in the discussion that takes place in such spaces. Despite decades of research into asynchronous online discussions, Kirschner and Erkins (2013) noted that they have not always lived up to their expectations – such as providing a space in which learners could engage in argumentation. Stahl, Cress, Ludvigsen, and Law (2014) described “the literature on knowledge building in threaded discussions” as “discouraging, which is concerning given the widespread use of such systems” (p. 121). Conversation analysis (CA) offers an approach to understanding discussion from an interaction-oriented perspective, providing a means of making sense of how students themselves orient to the task of engaging in online discussion.

The interactionally situated nature of learning and knowing has been emphasized by sociocultural theories (Rogoff, 1990), interaction analysis (Jordan & Henderson, 1995), discursive psychology (Edwards & Potter, 1992; Potter, 2012), and theories of group cognition (Brown, Collins & Duguid, 1989; Greeno, 1998). Further, it is widely acknowledged that “measuring the effectiveness of dialog or collaboration is not a straightforward affair. It highly depends upon the details of the setting and the group practices” (Stahl et al., 2014, p. 123). Analysis of online discussions has often been pursued through researcher-generated analytic frameworks, such as Gunawardena, Lowe, and Anderson’s (1997) interaction analysis model. These analyses typically rely on content analysis methods that fragment online discussions to code and count (often in an automated manner) the number of fragments falling
In this conceptual paper, we propose that conversation analysis (CA) (Sacks, 1992; Sacks, Schegloff, & Jefferson, 1974) is a useful alternative for the study of online discussion. CA is a well-established approach that originated within sociology (Sacks, 1992) and that provides analysts with theoretical, methodological, and analytic tools for studying online discussions as it naturally occurs (Giles et al., 2015; Paulus, Warren & Lester, 2016). It can usefully be employed to understand the “sequences of action or [conversational] ‘moves’” (Schegloff, 2007, p. 2) that students engage in. This is done through a turn-by-turn analysis of the moves (e.g., turn design, sequence organization) deployed as a part of the ongoing interactional accomplishment of identifiable social or institutional objectives. Through CA, researchers may gain a better understanding of what these conversational moves are actually accomplishing when students are engaged in online discussions for the purposes of learning. We draw from one specific kind of online interaction – asynchronous online discussions – to demonstrate the usefulness of CA by illustrating how three conversational moves (doing agreement, sharing personal experiences and stories, and deploying cognition verbs) tend to function in social interaction. We note that there are numerous other conversational moves that could be usefully understood with CA methods (Sidnell & Stivers, 2013).

Importantly, the aim of this paper is to illustrate how CA’s microanalytic focus and somewhat agnostic stance toward cognition can provide useful insights regarding online discussions in educational contexts. We are explicitly interested in illustrating how CA can be leveraged first to understand what is happening in online discussions; we leave the question of whether or not learning has occurred for others to consider. What happens in conversations has been positioned as relevant to the learning itself by a variety of theories, including situative perspectives of learning (Greeno, 1998).

To situate our exploration of the utility of CA in the larger discourse about the analysis of online discussions in learning contexts, we explore the use of scaffolding and scripting of discussions into certain conversational patterns (usually argumentation) which are privileged by researchers. We suggest that attending more closely to how students choose to take up online discussions (by drawing on personal experience) has value. We then briefly introduce CA as an approach and how it serves as a useful contrast to the more common methods of coding and counting that have been used to analyze online discussions. We describe the growing number of publications that have used CA methods specifically to look at online discussions. Then, we demonstrate how three common conversational moves prevalent in online discussions – doing agreement, sharing personal experiences and stories, and deploying cognition verbs – would be treated from a CA perspective, contrasting it with how scripts and scaffolds tend to treat these moves. We provide an example of each, for illustrative purposes only, arrived at after our extensive conversation analysis of a larger dataset. A line-by-line analysis is presented in contrast to traditional “code and count” approaches to illustrate the usefulness of CA for understanding online discussions in learning contexts.

Beyond Argumentation Models

Despite a long line of research, what happens in online discussions remains unclear. Rourke and Kanuka (2007) noted a decade ago that “students rarely engage in the communicative processes that comprise critical discourse, and in the rare cases when they do they do not achieve the purported outcomes” (p. 106, emphasis added). Gao, Zhang, and Franklin (2013), in a more recent review of the literature, concluded that student posts lack focus, are superficial, and contain “condensed expositions of their own ideas without attending or responding to the ideas of others” (p. 470). Loncar, Barrett, and Liu (2014) also concluded that unmoderated discussions “will likely not result in ‘effective’ discussion, learning or knowledge construction” and that students must be taught “how to ‘use’ the forum . . . often through the use of complex scaffolds, models, protocols, and assignment parameters” (p. 99).

In response, scholars have done just that – created scaffolds and scripts to ‘help’ learners engage in the preferred style (e.g., Kopp & Mandl, 2011; Lee, 2015; Ludvigsen, et al., 2016; Noroozi, 2012; Oh & Kim, 2016; Rienties et al., 2012; Tsovaltzii et al., 2014). Weinberger et al. (2005) described scripting as:

...an alternative to training students to follow a specific sequence of activities . . . scripts become part of the computer interface and may guide learners to engage in the specified activities of collaborative learning. Scripted interfaces may, for instance, restrain access to the interface, so that learners may take turns and contribute at specified times. Scripted interfaces may also prompt specific activities, for example, asking a discussant to contribute a question. (p. 8)
Scripts are often used to encourage engaging in argumentation. However, scaffolding argumentation does not necessarily work. Oh and Jonassen (2007) utilized “constraint-based argumentation scaffolds” (p. 97) but were disappointed to find that “although argumentation scaffolds for rebuttal (I don’t agree because) and elaboration (I can’t understand your point) were provided, neither discussion group used them very much to generate rebuttals and elaborations” (p. 105). Oh and Jonassen attributed this finding to an unwillingness of American students to “rebut each other or engage in spirited arguments” and argued that students were afraid to “harm peers’ feelings,” preferring simple agreement to “more challenging argument types such as evidence or elaboration” (p. 105). More recently, Slakmon and Schwartz (2014) noted that “it was not clear that the argumentation support of the software was decisive in overcoming barriers to discourse” (p. 120). There is, then, growing evidence that students would prefer not to engage in this way due to their concern about its impact on their peer relationships.

Argumentation is the underlying structure for a variety of analytic frameworks that have been used for online discussions. Weltzer-Ward (2011) reviewed over 50 frameworks and noted that the Community of Inquiry framework (Garrison, Anderson, & Archer, 2000) and Gunawardena et al.’s (1997) interaction analysis model (recently critiqued and revisited by Lucas et al., 2014 and Gunawardena et al., 2016) continue to dominate the research landscape (e.g. Darabi et al., 2011; Hew & Chung, 2011; Lai, 2013). Weltzer-Ward (2011) noted that there is a “need to expand these schemes to address ways of communicating other than through structured argument or problem solving” (p. 70, emphasis added). This seems wise given students’ reluctance to engage in argumentation online.

Loncar et al. (2014) reviewed 43 studies of online discussions and problematized the over-reliance on researcher-directed scaffolds and prompts from an ethical stance. They argued that “a model of locus-of-control on forum and asynchronous online discussion use should be developed in order to better evaluate and understand the effect and ethical implications of locus-of-control on forum and asynchronous online discussion use in educational contexts” (p. 104). They noted that using “prompts, scaffolding structures, and discussion strategies, either through methods or new tools or environments, significantly weights locus-of-control, as well as autonomy, towards the form system and instructor and away from students, peers and learners” (emphasis added)” (p. 104). Lucas et al. (2014) also addressed the consistent lack of overt dissonance and challenge in online discussions, traditionally required for “higher levels” of knowledge construction, attributing it to “insecurity aspects manifested by students and their concern about how they were perceived by their colleagues when participating in discussions” (p. 576). This finding is similar to Lester and Paulus (2011), Paulus and Lester (2013), Benwell and Stokoe (2002) and others who have highlighted the perceived risk in the public displays inherent to online discussions. Engaging in visible conversations with invisible peers is a delicate matter that must be handled with care.

In other words, engaging in online discussions does not occur in a vacuum – students are drawing on their previous experiences and make specific choices about how to engage. These choices are situated in larger social contexts that should be taken into account by researchers. For example, Oztok (2016) highlighted the importance of sharing personal experience to build common ground – a pre-requisite for meaningful dialogue to take place. Throughout the “levels” of knowledge construction (Gunawardena et al., 1997), identity claims (grounded in personal experience) have a role to play. Oztok (2016) argued that learners should be encouraged to incorporate more of themselves into the discussions, as “increasing the intellectual complexity of the discussion while keeping the topic personal helped students with achieving a new synthesis . . . lack of personalization could lead to a lack of understanding” (p. 183). More research is needed into how power plays a role in online discussions, “examining identifications with respect to power can provide insights into the otherwise hidden constraints.... social, political and historical meanings” (p. 184).

While argumentation as a type of discourse remains important in science, technology, engineering and math fields, doctor-patient communication (Labrie & Schultz, 2014), and educational contexts more generally (Rapanta & Macagno, 2016), focusing on it to the exclusion of all other models is problematic. Features of online discussions not consistent with argumentation models may, in fact, be quite necessary for students to engage at all. For example, agreement, rather than disagreement, has been found to be prevalent in online discussions (Oh & Jonassen, 2007). Understanding how agreement functions, rather than trying to eliminate it, should be the goal. CA can provide this understanding.

An Abbreviated Introduction to Conversation Analysis

CA is a distinctive, qualitative methodology for studying language in use, which was developed by Harvey Sacks, Emmanuel Schegloff, and Gail Jefferson in the 1960s and 1970s. In this article we do not aim to introduce CA fully, but rather we point to its utility in order to inspire scholars to explore it more fully. Here we offer a brief summary of some of its key assumptions. We refer readers interested in learning more to the plethora of introductory and advanced level methods textbooks focused on the basics of CA (e.g., Sidnell & Stivers, 2013; ten Have, 2007). This
methodological approach focuses on the ways in which talk and text are locally occasioned, recipient designed, and accomplished sequentially (Sacks, 1992). Simply put, scholars using CA aim to understand how social actors make sense of one another in their turns of talk. CA is based on the assumption that through language (broadly defined) social actors do things such as blame others, offer an invitation, or craft an identity. For instance, when someone states, “would you like some iced tea,” it is not simply about the topic of tea but also “doing an offer” (Schegloff, 2007, pp. 1-3). Thus, at the level of theory, it is common for CA to be positioned as social constructionist in scope, and more particularly as an analytic method that takes up a micro-social constructionist stance, given its focus on situated interactions and interactional order (Gubrium & Holstein, 2008).

The analytical goal of CA is “to describe the intertwined construction of practices, actions, activities, and the overall structure of interaction” (Sidnell & Stivers, 2013, p. 2). CA researchers concern themselves with a detailed, micro-analysis of how talk is locally occasioned and organized sequentially to accomplish particular social actions. Notably, CA scholars generally engage in a line-by-line analysis of the turn-by-turn nature of interaction, with each conversational turn understood to be in response to what came before. More particularly, CA scholars have often been interested in the study of naturally occurring data; that is, data that does not require a researcher to produce it. Such data have often been described as mundane or ordinary (e.g., dinnertime conversations) or institutional (e.g., online discussions in an educational contexts). Analytically, because CA scholars are interested in both what and how things are stated/written, they have generally attended to several core conversational moves, including turn design and repair, among others (Sidnell & Stivers, 2013).

CA has been taken up by researchers in a range of disciplines, including second language learning (Firth & Wagner, 1997; Seedhouse, 2004; Waring, 2005, 2008, 2013, 2015; Wong & Waring, 2010) and education more generally (Mazur, 2004), for example in a recent special issue on using CA to study learning (Carlgren, 2009; Hellerman, 2009; Martin, 2009; Marton, 2009; Melander & Sahlström, 2009; Piirainen-Marsh & Tainio, 2009; Sahlström, 2009; Vehviläinen, 2009). Solem (2016) examined how students were able to make their knowledge claims count in classroom interactions – a space where typically only the teachers’ knowledge claims matter. Kapellidi (2013) used CA to explore what happens when students deviate from the expected turn-taking patterns of the classroom – showing how such deviations are an organizational resource used by the students to reinforce or undermine the institutional nature of the classroom. Stokoe, Benwell, and Attenborough (2013) used CA to illustrate how students downgrade their performances and knowledge claims in front of their peers – echoing what Lester and Paulus (2011), Paulus and Lester (2013), and Lucas et al. (2014) have also noted in their work.

Rather than using a priori argumentation and content analysis schemes to categorize segments of talk according to researcher-generated models (and prescribing ever tighter constraints when they fail to materialize), CA begins with the participants’ own talk. Through a line-by-line analysis, conversational moves are found to perform a whole range of functions and outcomes which are created in the moment as the conversation unfolds.

How Conversational Moves Function in Online Discussions

Although CA was initially developed through analysis of telephone call recordings and face-to-face interactions, it has been usefully adopted in studies of synchronous (e.g., Steenssen, 2014), quasi-synchronous (e.g., Meredith, 2016), and asynchronous (e.g., Antaki et al., 2005; Baym, 1996; Herring, 2010/2011) computer-mediated communication. For example, Koschmann and colleagues (2005) examined both online (chat) and offline interactions to understand how participants deploy “problematizing moves” to call into question something previously agreed upon. Paulus, Warren, and Lester (2016) conducted an extensive review of the literature showing how CA methods have been taken up to analyze online discussions, and Giles et al. (2015) explored how the use of “digital CA” is relevant across disciplines. They noted that while aspects of discussion may look different online (e.g., conversational repair moves), CA’s orientation to turn-taking and the sequential ordering of interaction may still be of use in making sense of the social organization of discussion. As Sacks et al. (1974) observed, “turn size is not fixed, but varies” with the local order (p. 709). In other words, CA does not limit itself to turns of a particular length, but instead examines turns as they occur naturally within locally organized discussion. Thus, there is great value to exploring how CA can be used for the analysis of asynchronous discussions, and in fact scholars have already begun doing so (e.g. Gibson 2009a, 2009b).

Language structures have often been used as evidence of learning by being assumed to represent cognition or internal mental states, rather than being understood for what they are actively doing or accomplishing in the talk. CA can provide a better understanding of what particular language structures do, before categorizing them according to a priori frameworks. We demonstrate this with three common conversational moves prevalent in online discussion: doing agreement, sharing personal experience and stories, and deploying cognition verbs (e.g., I know, I think). We contrast how content analysis approaches (guided by argumentation models, scaffolds, and scripts) generally interpret these conversational moves with how CA might do so.
The context for the extracts analyzed in this section are taken from data collected as part of a research study of American undergraduate nutrition students. In this task, students were asked to post about their beliefs and experiences with dietary supplements, as well as what they learned from the readings and the professor’s lecture on the topic. The analysis we share here is only for illustrative purposes; however, it is important to note that these three conversational moves were not a priori categories or codes that we applied to the data. Rather, we identified these findings after engaging in a bottom-up, emic analysis that resulted in several peer reviewed publications (Lester & Paulus, 2011; Paulus & Lester, 2013).

How Agreement (and Disagreement) Function in Talk

In studies guided by prescriptive models of discussion, statements of agreement and disagreement are typically categorized into a particular phase of the argumentation or knowledge construction process. “I agree” might be assumed to be signaling actual agreement (i.e., an internal cognitive state of agreement) with a previous statement. It is considered an early phase in argumentation, perhaps necessary but not sufficient for learning to occur. For example, unsupported agreement statements would be categorized into the second phase (exploration) of the Garrison et al. (2001) cognitive presence model (Figure 1), but only into the first phase (share and compare) of Gunawardena et al. (1997) (Figure 2).

Figure 1. Phases of Garrison et al.’s (2001) cognitive presence model as adapted by Park (2009) and illustrated by Darabi et al. (2011), highlighting added

After a triggering event, the cognitive presence model prescribes that learners should explore a topic through agreement, information sharing, and exchanging personal stories or opinions. They should then, ideally, move away from exploration toward integration of ideas by providing support for their hypotheses or evidence for their agreements, or by disagreeing with each other. Eventually learners should move into a resolution phase. The tendency for participants in an online discussion to “simply agree” with others has been framed by researchers of online discussions as problematic (e.g., Oh & Jonassen, 2007). Agreement is particularly problematic for argumentation, as argumentation requires overt disagreement at some point through challenging one another’s perspectives or engaging in debate.

Similarly, in Gunawardena et al.’s (1997) interaction analysis model, disagreements are part of Phase Two ("discovery and exploration of dissonance or inconsistency among ideas, concepts or statements,” p. 414) and are categorized into a higher phase than agreements (see Figure 2).
From a CA perspective, in contrast, statements of agreement and disagreement – far from simply reflecting an internal cognitive state of being - can perform a variety of social actions depending on how they are deployed in the conversation. Participants may use statements of agreement while they are engaged in challenging and disagreement. They may do this to mitigate the force of the disagreement or to help the other interlocutor maintain face. These subtleties, we argue, can easily be overlooked when using content analysis to fragment the talk before assigning it to a category and counting it. From a CA perspective, how statements of agreements and disagreement function go beyond representing literal internal cognitive states of agreement or disagreement with the previous statement. Context matters enormously, and thus a closer line-by-line analysis attending to how the statements of agreement and disagreement are actually functioning is warranted.

Baym (1996) conducted one of the earliest studies describing the variety of ways in which participants performed agreement and disagreement in online discussions. Few sequences that were functioning as agreement were marked with explicit agreements; rather the participants performed agreement through elaborations on others' assessments. Agreements were often qualified – a tactic sometimes used to avoid being held accountable for the agreement. Disagreements were quite rare in Baym’s data (only 10% of the posts) and were often prefaced by partial agreements which functioned as social aligners – helping the conversation continue smoothly by not offending the other person. A majority of disagreements included reasoning to support what could at times (but not always) be taken up as a face-threatening or a dispreferred act. Angouri and Tseliga (2010) and Sifanou (2012) noted that disagreement is not necessarily dispreferred, impolite, nor face-threatening; it all depends on local practices and context. Communities have their own expectations and norms for polite behavior, which will impact how disagreements are performed and received (Graham, 2007). Graham called for further exploration of “ways that power dynamics influence perceptions of and responses to perceived impoliteness . . . to understand the negotiation of disagreement and politeness in extended interactions” (p. 757). This highlights the difficulty of simply coding and counting “agreements” or “disagreements” without taking into consideration the larger context of the talk.

The following extract offers an example of how CA affords the analysis of agreement and disagreement. Here, a student posted an initial message after which three students offered comments.

**Extract 1.**

**Initial post by Jenn**

I have not ever taken a dietary substance for an extended period. I am not allergic to any foods and also am not very picky so I eat wide varieties of food with all the essential nutrients. I try to, when I remember, to take a multi vitamin but that is not very often. I believe dietary substances are good things though for certain
people. People who are trying to lose weight, people who are sick, and people who are allergic to certain foods may not be getting all the nutrients they need. On the other hand, people without these conditions should not solely depend on dietary substances because in some cases I have heard of them causing problems.

**Comment by Jake**
Dietary supplements can result negative health affects if you disregard the servings size or simply take something that "looks appealing." I, personally, stick with supplements that your body requires to perform more efficiently, such as Protein and Leucine.

**Comment by Lucy**
You seem to be content in your choices and really for you, that’s all that matters. I think a good part of your preconceptions about supplements is all in our heads. It’s a mental thing to some degree even though the effects from it can be seen. I would like to see a test run between people who eat healthy and exercise and people who take large amounts of supplements so the differences can be seen.

**Comment by Kendra**
I agree with Lucy. A lot of our perceptions are psychological. Like if someone is always getting colds they might think they need more vitamin C, when actually they are just a college student who comes in contact with hundreds of people a day (and millions of germs). I don’t really see the need for supplements, for college-aged people, except in special circumstances. I don’t think there would be a huge difference between the people who take supplements and the people who don’t.

Jenn opens her post by foregrounding her own experiences (or, rather, lack thereof) with “dietary” substances, noting that she has never taken such substances for “an extended period.” Further, she offers details about her personal experience (e.g., “not allergic,” “not very picky,” “eat wide varieties of food”), which serve to bolster her claims. Prefacing a belief with personal experiences functions to position an individual as having the right to offer their perspective on a given manner – as they indeed have experience to justify their claims. Further of note in Jenn’s post is her use of two lists (i.e., “not allergic,” “not very picky,” “eat wide varieties of food”; and “people who are trying to lose weight,” “people who are sick,” “people who are allergic”), both of which have three parts. In talk, lists are generally used to support particular claims (Jefferson, 1984), with three-part lists in particular often serving to create a sense of representativeness (Bowker & Tuffin, 2007; Edwards & Potter, 1992).

The comments that follow Jenn’s post generally display agreement; however, what is being socially accomplished is far more layered than would be captured by simply ‘coding’ the comments as agreement. For instance, Jake’s agreement with the opening post is positioned in relation to his personal experience, which interestingly does include supplement use. In this way, his agreement is a bit downgraded, with his own experiences functioning to very subtly offer another reason one might take supplements beyond what Jenn claims. So, while Jake does not explicitly disagree with Jenn, he does provide an ‘addendum’ to her claims. Explicitly stating disagreement with a previous poster constitutes a delicate, indeed dispreferred, act within what is already a risky activity – making visible claims about what you ‘know’ or are ‘learning’ to an audience of invisible peers (Lester & Paulus, 2011). As such, it is perhaps unsurprising that agreement is far more prevalent in online discussions, and, when disagreement does occur, it generally is produced in delicate and subtle ways. More broadly, both Jenn and Jake locate their claims within descriptions of personal experiences. Buttny (2012) argued that

experience is a resource that we can draw upon and make relevant for our own purposes.

. . . it is malleable and can be used to tell various stories, depending on the context and the interlocutor. As analysts, our job is to ascertain how social actors show that experience matters to them through their discourse and embodied action. (p. 604)

Experience talk, then, performs a variety of functions in online discussions and cannot simply be categorized, coded, and counted in isolation of its larger functions.

Different from the other commenters, Lucy suggests that if Jenn is “content” with her “choices,” “that’s all that matters” and moves to suggest that beliefs about supplement use is “a mental thing,” qualifying this with the phrase “to some degree,” although these beliefs may even discount evidence to the contrary (“though the effects from it can be seen”). Lucy goes on to wish for an experimental study (“a test run”) to provide further evidence of whether they work or not – moving the issue beyond beliefs and personal experience to data. The next commenter, Kendra, follows up by offering agreement, not with the initial post but rather with Lucy’s claims about “perceptions” being “psychological” rather than grounded in evidence. Interestingly, Kendra further claims that “college-aged people” “don’t really” need supplements. Here again such a claim may serve to disagree subtly with Jake’s claim in particular, given he is a college student using supplements. While one might code all these comments as simply ‘agreement,’ there is much that is being accomplished socially through and in the language use. In the dataset from which the extracts are drawn, the phrase “I agree” appeared 331 times, whereas the phrase “I disagree” occurred only
four times. Further, even when “I disagree” is scaffolded or scripted into online discussion software, as described by Oh and Jonassen (2007), students are still reluctant to use it. As we have illustrated, what CA affords in the study of agreements is a more nuanced understanding of what agreements accomplish in the talk.

How Sharing Personal Experiences and Stories Function in Talk

In Extract 1, we noted how drawing upon personal experience can function to bolster arguments. Analyses of online discussions have frequently found that students use personal experiences and stories to support their posts more often than they cite “credible” scientific evidence such as assigned readings, lecture notes, or other “facts.” Prescriptive models of academic talk have tended to categorize personal stories as a less desirable phase of interaction; for example, “personal narration” is in only the second phase of the cognitive presence model (Garrison et al., 2001) (Figure 1). However, like agreement and disagreement, sharing personal experiences and stories serves a variety of important functions in conversations – such as affiliating with others to ensure that the conversation continues. Given the risk involved in displaying learning for an invisible audience (Lester & Paulus, 2011), using personal experiences and stories as a way to engage in reciprocal self-disclosure rather than performing academic expertise through facts is an understandable choice (see Stokoe et al., 2013). Paulus (2006) proposed “models of connection” as an alternative to “models of challenge,” in which building relationships with other participants is seen as an important aspect of the interaction. Sharing personal experiences and stories may help lower anxieties about participation.

Personal experience is recognized by constructivist learning theories to be a valuable starting point for learning interactions (Leont’ev, 1979). In fact, taking into account the personal experiences that learners choose to share may provide a valuable insight into the learners’ preconceptions and beliefs about the topic to be learned. Initial beliefs and misconceptions are notoriously difficult to change, and personal experience may be seen by peers as the most credible evidence. In our data, one student specifically stated this point of view, as illustrated in Extract 2:

Extract 2

Initial post by Riley

Personally, I do not know a whole lot about supplements, but I do know that if I am not well educated in an area, I am not going to go and nag people who do know a lot about it and tell them how I think it is a bad thing. I think it is ignorant when people complain about something when they do not even know enough about it themselves. So many people say, ’I do not take supplements but I think they are bad’ Well, unless you have had an actual bad experience with them, then it is probably not your place to say they are bad (emphasis added).

This extract suggests that without drawing upon personal experience to support one’s argument, peers may disregard the argument entirely.

In CA, “experience talk” has been found to function in a variety of ways in online environments – as “narrative evidence” for online consumer reviews (Hong & Park, 2012), as “reciprocal self-disclosure” in online support groups (Barak & Gluck-Ofri, 2007), and as “personal expertise” used to engage with others while commenting on health science news articles (Shanahan, 2010). Kääntä and Lehtinen (2016) noted that “factual” and “social” contributions have always been treated differently as sources of evidence in academic discussions (similarly to “scientific” versus “personal” expertise as described by Shanahan, 2010; and “narrative” versus “statistical” evidence in Hong & Park, 2012). Kääntä and Lehtinen argued that in peer-to-peer environments personal knowledge becomes more relevant as part of a meaningful interaction. They illustrated how argumentation was accomplished through experience talk, which was often used to support agreements.

In fact, Kääntä and Lehtinen (2016) found a continuum of experience talk, from single turn minimal narratives such as “small stories” (e.g., Page, 2010) to descriptions and interpretations of experiences. “In inter-turn argumentation, experience talk is co-constructed through first and second stories and by other kinds of reciprocal sharing of similar experiences – this accomplishes agreement and affiliation” (p. 13). In CA, stories are seen as interactional accomplishments. This perspective allows researchers to attend both to how stories are accomplished interactionally as well as to what is accomplished in the telling (Kasper & Prior, 2015). To make sense of participants’ stories, they must be accessed by attending to the ways that they unfold in interaction. In other words, analysts can look beyond the content of a story to understand how the story is interactionally constructed to achieve something (such as a display of learning). CA studies have identified how the act of storytelling is both recipient-oriented and designed to accomplish a variety of actions, including complaints, agreement or disagreement, accounting, alignment, and troubles-telling (e.g., Jefferson, 1978, 1988; Liddicoat, 2011; Mandelbaum, 2013; Stivers, 2008). Storytelling has also been shown to be a means of communicating a teller’s stance toward the object about which they are reporting (Pulvermacher & Lefstein, 2016; Sacks, et al., 1974; Stivers, 2008).
The following extract includes an example of using personal experience and stories to perform knowledge and beliefs around dietary supplements for his audience, as well as to forestall any possible disagreements with his claims.

**Extract 3.**

**Initial post by Toby**

I was actually very surprised when I was reading through the other posted blogs that there haven’t been any people that have said they had ever used a dietary supplement. I guess I’ll have to be the first to say that unfortunately I HAVE tried diet pills before, a few different kinds actually. When I was younger, especially in middle and high school, I was in a constant battle with my weight. I was ALWAYS looking for something that would actually work for me. I tried all kinds of different fad diets (Atkins, South Beach, the ‘I’m not ever eating again diet’—yeah, like THAT lasted long!) and actually had an average success rate of about 15 pounds, excluding the Atkins diet, which I lost 45 pounds on, but too my surprise (rolling my eyes), I have gained 30 of them back.

In Extract 3, Toby begins with a surprise display (Pomerantz, 1984) about the lack of personal experience claims in the discussions – that is, no one has yet admitted to trying diet pills. This surprise allows him to register the unexpectedness of information conveyed – or rather, not conveyed – in prior posts. This surprise further registers his post as contextually relevant by highlighting the contrast between his expectation that others would have tried a dietary supplement and the realization that no one has yet discussed this. Thus, his own experience as someone who has tried them becomes relevant to the larger discussion at hand.

The humor in this post, most often visible in the parenthetical asides (e.g., “rolling my eyes”), also acts to allay the receipt of negative responses which might be incurred through revealing this about himself. Toby’s story, while simultaneously being used to claim knowledge of the topic under discussion, also allows him to mitigate any disagreement or negative reactions that may occur because of his admission of partaking in fad diets and dietary supplements. Content-oriented models of analysis might focus on the way that this personal experience positions the author as having learned the importance of medical assistance in losing weight from his experience with fad diets.

Toby’s use of personal experience, then, functions as narrative evidence and personal expertise (Shanahan, 2010). It sets up the author’s “right” to demonstrate knowledge about the topic – in this case his interpretation of diet pills as a type of supplement. As a story about the author’s own experience, the claims Toby makes within the story and following it are given more power. The storytelling sequence allows the author, further, to make assessments regarding the value or worth of different diets and supplements. By indexing his own participation in diets, including fad diets and diet pills, this participation acts as evidence that he has the necessary experience to make an assessment on this topic (Pomerantz 1984). We argue that encouraging the sharing of personal experiences and stories, rather than detracting from serious learning conversations, offers a way to engage students in the content and might reveal topics and areas for targeted instruction.

**How Cognition Verbs Function in Talk**

Our final illustration of how language choices may function in online discussions from a CA perspective is that of cognition verbs. Cognition verbs are often treated as representational in prescriptive models of online discussions. That is, *I think* or *I know* are often analytically treated as if they represent underlying cognitive states, an actual peek inside mental processes, with *I know* treated as a stronger knowledge claim than *I think* or *I believe*.” However, in the context of efforts to analyze online discussions for evidence of student understanding, Mikesell et al. (2017) and Lindwall and Lymer (2011) have both reminded us of Wittgenstein’s (1953) advice:

> Try not to think of understanding as a ‘mental process’ at all. For that is the expression which confuses you. But ask yourself: in what sort of case, in what kind of circumstances, do we say, ‘now I know how to go on’.

That is, we should treat “understanding” (or learning or knowing) as an interactional practice (the “going on”) that students accomplish with their language use, rather than as an interior cognitive state revealed only through representational statements. Some scholars have acknowledged that cognition verbs such as expressions of uncertainty (e.g., *I’m not sure, I wonder, maybe I should*) are important in online discussions (Jordan et al., 2014) but have typically coded and counted their occurrences rather than closely examining how they function in the actual practices of talk.

Cognition verbs cannot be interpreted as straightforward revelations of interior mental states (Edwards, 1999), because they perform a range of functions in our actual practices. For example, *I think, I believe,* and *I mean* have
been found to be used strategically in political discourse to show one’s level of commitment to a specific stance and to invite the hearer to adopt the same perspective (Fetzer, 2008, 2014). Karkkainen (2006) defined stance, specifically epistemic stance, as “marking the degree of commitment to what one is saying, or marking attitudes towards knowledge” and reminded us that “displaying stances is part and parcel of the interaction between participants who respond to prior turns and design their talk for the current recipient” (p. 704).

Cognition verbs with first person subjects are a common type of epistemic marker and can serve a variety of functions in the talk – from mitigating what is said, to displaying uncertainty, to aligning oneself with an upcoming “loaded” message, to displaying the status of a prior assessment as disputable (e.g. Heritage & Raymond, 2005). “Stance taking marked with I think is a dynamic interactive activity, an interactional practice, engaged in by coparticipants in conversation, rather than framing an isolated ‘thought’ or position of an individual speaker,” argued Karkkainen (2006, p. 711).

As another example from CA, Weatherall (2011) examined the various functions of I don’t know as a hedging practice preliminary to complaints, criticisms, and self-deprecations. She noted that the phrase can be used to resist answering, avoid commitment and disagreements, and to “display uncertain knowledge or less than full epistemic commitment to what follows . . . I don’t know is not a literal claim to no knowledge, rather it is a hedging practice” (p. 332).

Know and understand have both been studied from a CA perspective. Mikesell et al. (2017) found that I know could function to resist or endorse a previous claim; claim independent knowledge; respond to correcting, advice-giving or informing; block announcement delivery; and endorse an assessment – its function is entirely relative to the previous turn of talk. Lindwall and Lymer (2011) focused on the positioning and interactional consequences of the use of understand in science education, noting that all its uses are “intimately tied to the normative, disciplinary and institutional concerns of the setting” (p. 471). They also noted that I don’t understand often has different implications when directed to a teacher (taken up as a request for help after which assistance is nearly always forthcoming) than to a peer (when the request for help may or may not be forthcoming).

In our dataset, the assigned task was for students to write about what they believed or had experienced with dietary supplements – which at the time we naively thought would be a very straightforward way of finding out what they already knew, thought, or believed. Our own initial assumptions were grounded in a representational view of language – that the students could and would unproblematically tell us what they knew and that these responses could be treated as accurate representations of such. As we reported in Lester and Paulus (2011), we were surprised at the frequency with which students started their posts with “I don’t know,” immediately followed by what they actually did know, as illustrated by this response to the prompt asking what students knew about dietary supplements:

**Extract 4**

**Initial post by Gail**

I don’t really know much about supplements. I’ve always had the impression that vitamins are good for you. I know that my mom takes a daily multivitamin and another type of mineral supplement for health reasons, which was recommended by her doctor. So, these types of things don’t scare me, and are probably something I’ll consider taking in the future. However, like a few people have said, things that are supposed to give you energy do make me nervous. As far as protein shakes go and other types of protein supplements that many athletes consume, I don’t know much about them. I’ve never had any personal experience with them, but a lot of my guy friends have taken things of that nature in the past.

In Extract 4, Gail begins with the disclaimer, “I don’t really know much,” which we interpret not as a literal claim, but a hedging and distancing strategy. In other words, Gail distances herself from the claims that are to come. She follows this claim of not knowing with a reference to her mother’s use of vitamins, who she positions as not just taking them for her own reasons, but because they were recommended by a doctor. Indeed, a “doctor” is culturally positioned as holding the epistemic authority to make such a recommendation, and thus evoking the role of the doctor in her mother’s decision to take vitamins serves to position her mother as justified in her decision. While Gail claims that she may take vitamins “in the future,” she also notes that some types of supplement use make her “nervous.”

Edwards (1999) has suggested that emotion talk, as evidenced with the use of the word “nervous,” can be understood as not simply a reflection of a mental state but as functioning to link ideas together. In this case, the use of the word “nervous” foregrounds the idea that not all supplement use is acceptable to Gail; yet, interestingly she never makes explicit which supplements make her “nervous.” Vagueness often functions to shield or distance a writer/speaker from having to justify or defend their claims (Attenborough, 2011, Benwell & Stokoe, 2002;).
Near the end of her post, Gail again writes that she does not “know much,” in this case about “protein shakes” and “protein supplements,” which perhaps functions to justify why she does not offer a particularly strong position on the use of such supplements. Instead, she notes she lacks experience and therefore presumably does not hold epistemic rights to make a claim on whether people should use them or not. Experience, as we noted above, is commonly drawn upon in talk to bolster one’s claims and justify their right to know (Barnes, Palmary, & Durrheim, 2001; Marquez, 2010).

Generally, then, the use of I don’t know prior to describing experiences or beliefs provided students a way to make claims that fulfill the duties of the academic task, while at the same time distancing themselves from being held accountable for those claims. As it turned out, asking students to talk about what they know publicly in front of unknown peers is not an unproblematic request – yet it is one that argumentation models often assume should occur, to the point of scaffolding argumentation moves when they do not naturally occur. Thus, while the use of I don’t know in response to any academic task would typically be taken as an admission of lack of knowledge, it frequently functions as a distancing preface to sharing what actually is known. Rather than concluding that I don’t know was being used to represent the inner cognitive state of not knowing, we analyzed what I don’t know was being used to do in the conversation, consistent with CA’s epistemological assumptions (Lester & Paulus, 2011). We noted that this phrase seemed to function as a strategy to minimize students’ stake in the online discussion task. As Benwell and Stokoe’s (2002, 2005) research on university tutorial sessions suggested, disclaimers such as I don’t know help maintain a student’s academic identity as a novice and act to qualify upcoming performances.

Conclusions

In this article, we have argued for the utility of a participant-driven approach to the analysis of online discussions, as a bottom-up perspective can serve to illustrate how learning unfolds moment by moment.

We argue that without a close, line-by-line analysis of how features of participants’ talk accomplish particular actions, researchers cannot say much about how argumentation, knowledge construction, and/or other desired types of interaction naturally occur. CA requires a detailed analysis of talk-in-interaction, with a focus on participants’ (not the researchers’) orientation to the talk and members’ own (not the researchers’) categories and interpretations. By employing CA, researchers interested in how argumentation, knowledge construction, or other styles of interaction for learning purposes actually occur can develop a better understanding of how conversational moves function in talk.

We suggest that focusing on what makes an online interaction ‘generative’ or not can be understood by studying what is socially accomplished in and through the conversational structure employed. As we have illustrated, CA is a particularly powerful methodology for making sense of the nuances of online discussions. More particularly, we have illustrated how three conversational moves (agreements, personal experience and storytelling, and cognition verbs) tend to function in online academic discussions – discussions in which students are required to perform learning and knowing visibly for their unseen peers. As demonstrated in our analysis, common features of talk are often used by participants to accomplish a variety of social actions, sometimes in ways that are directly counter to what might be expected. The analytical tools of CA offer researchers a means of attending to these subtleties within an ongoing interaction.

There are many other conversational structures whose function in learning environments are well worth understanding, such as surprise displays (Wilkinson & Kitzinger, 2006) and assessments (Pomerantz, 1984). Further, there remains a need to consider issues of power at play in online conversations (Oztok, 2016). While not discussed in this article, CA can also be particularly useful for highlighting issues of privilege and social justice in online learning – such as what is treated as legitimate (Vayreda & Antaki, 2011) and how participant language choices might be deployed to avoid or deny “race trouble” (Durrheim et al., 2015).

While we recognize that students may need some instruction about how to engage in online contexts (Howard, 2012), scripting and scaffolding schemes can result in an ‘over-structuring’ of interaction. Students might mimic the scaffolded conversational procedures, while masking what they are actually doing to accomplish thinking and learning. Like other scholars (Weltzer-Ward, 2011), we suggest that such schemes should be expanded to include diverse ways of communicating that go beyond structured argumentation. Within such an interactional context, learners are invited to involve more of themselves in conversations, such as through storytelling and personal experience. Concomitantly, analysts are bound to attend to what is socially accomplished in talk, rather than simply noting surface features. Key issues in the study of online discussions for learning, such as cohesion, argumentation, and knowledge-building – which to date have been examined largely through automated counting, rational-logic models, statistical analyses, and software (Stahl, 2015) – could also be approached by attending to their turn-by-turn organization and beginning with the quintessential CA question: “Why this [conversational move] now?”
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Using Conversation Analysis to Understand How Agreements, Personal Experiences, and Cognition Verbs Function in Online Discussions


Biographical Notes

Trena M. Paulus [tpaulus@uga.edu] is a Professor of Qualitative Research at the University of Georgia in Athens, Georgia, USA. Her research interests include language-based approaches to studying online conversations and digital tools to support qualitative research.

Amber N. Warren [amberwarren@unr.edu] is an Assistant Professor of English Language Teacher Education in the Professional Specialized Studies division at the University of Nevada, Reno, USA. She uses discourse and conversation analysis to explore teacher preparation for working with multilingual learners, interaction in online education contexts, and the intersection of teacher practice and education policy.

Jessica N. Lester [jnlester@indiana.edu] is an Associate Professor of Inquiry Methodology at Indiana University, Bloomington, Indiana, USA. Her research primarily centers around methodological concerns related to the applications of discourse and conversation analytic perspectives often applied within mental health and education contexts.

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